AIR FORCE

NORTHROP F-89 SCORPION
Production Progress Toward the All-Weather Fighter

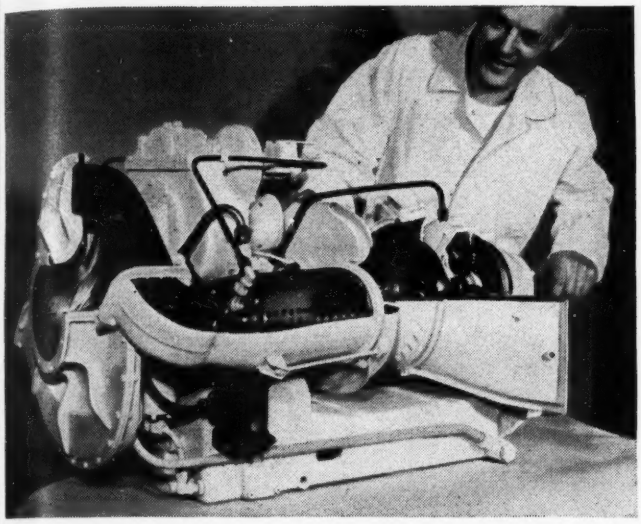
LESSONS FROM THE WAR IN KOREA
Two Congressmen Tour the Battlefront for AFA

MAY, 1951

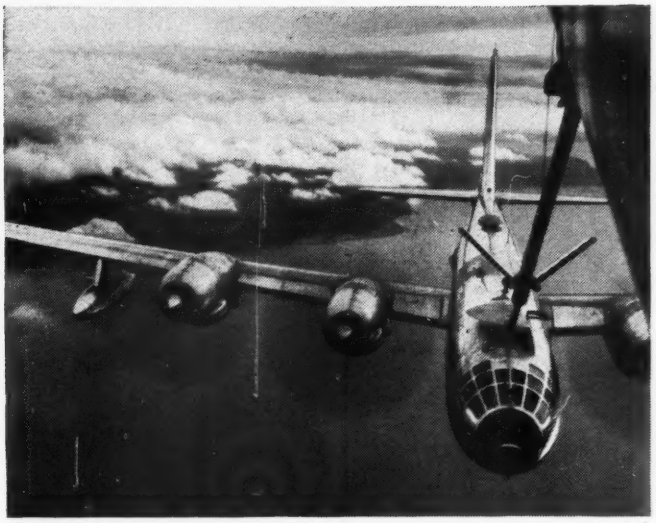
193 out of the 193 Douglas DC-6 airliners now in service or on order for U. S. airlines depend on Hamilton Standard *Hydromatic* propellers. In fact, *Hydromatics* now are specified for 98% of all U. S. transports.

HAMILTON STANDARD

Wherever Man Flies



PROPULSION. The 175-hp., 200-lb. Boeing gas turbine engine, developed for the Navy. First small-size, general-purpose turbine engine in the United States, it already has demonstrated excellent possibilities for powering trucks, boats and small aircraft.



REFUELING. For the Air Force, Boeing has designed and produced a new, highly improved device for refueling planes speedily, at high altitude. Known as the "flying boom," it extends greatly the range of American bombardment aircraft.

COMPUTER. Important to guided missile research is this electro-mechanical analogue computer designed by Boeing engineers. Simulating missile flight, the computer saves months of time and countless dollars otherwise spent in experimental test firing.

SAFE STOPS. Boeing has designed and built a new aircraft braking device, adopted by the Air Force for certain types of planes. Self-activating, this mechanism permits the application of full brake power with no skidding or wheel-locking on wet or icy runways.

Where do inventions come from?

There will always be inventors in America. But invention is no longer confined to the efforts of single-handed genius.

Today's constant flow of new and better products springs from close teamwork between creative imagination and effective research.

Each step in the development of a new product may involve its own inventions — the discovery of more efficient methods — new and better ways of accomplishing the supposedly impossible.

The examples shown here represent only a few of the new projects successfully carried through by Boeing in recent months. They are the result of highly skilled and gifted manpower working with the finest of modern laboratory equipment. Boeing's ability to produce outstanding aircraft has a firm basis in its unparalleled research and development facilities.

BOEING

Among Boeing's facilities for research and development are Acoustical, Aerodynamic, Armament, Electrical, Electronic, Flight Test, Hydraulic, Mechanical Equipment, Metallurgical, Physical Research, Propulsion, and Structural Test Laboratories, and the great Boeing Wind Tunnel.

3,500 HORSEPOWER PLUS... also

.39 lb. per h.p. per hr.—fuel consumption at cruise power

1 horsepower PLUS per lb. of weight with exhaust system

18 cylinders that operate at only 43% of power at cruise

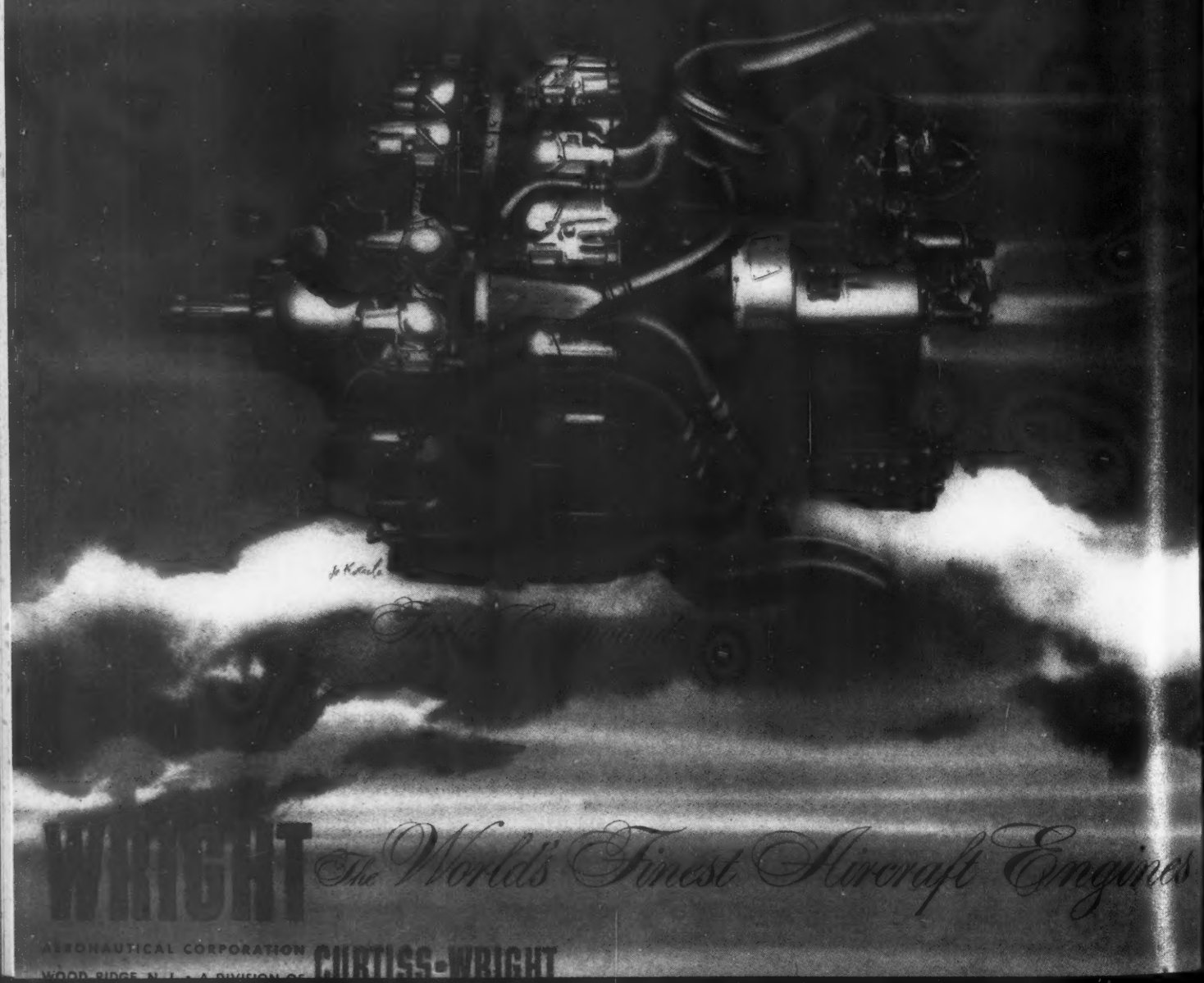
1 horsepower PLUS per cu. in. of displacement

Short, stiff crankshaft; one piece master rod bearings

Rugged steel crankcase for reliability and lower maintenance cost

Balanced air distribution plus fuel injection for longer valve, piston and plug life

Single lever throttle control—no power controls required



WRIGHT *The World's Finest Aircraft Engines*

AERONAUTICAL CORPORATION WOOD-RIDGE, N. J. • A DIVISION OF CURTISS-WRIGHT

AIR FORCE

THE OFFICIAL JOURNAL OF THE AIR FORCE ASSOCIATION

MAY, 1951 VOL. 34, No. 5

THIS IS AFA

The Air Force Association is an independent non-military, airpower organization with no personal, political or commercial axes to grind; established and incorporated as a non-profit corporation February 4, 1946.

Active Members are men and women honorably discharged from military service who have been assigned or attached to the US Air Force or its predecessor services, or who are currently enrolled in the Air Force Reserve or Air National Guard. **Service Members** (non-voting, non-office holding) are men and women currently assigned or attached to the US Air Force. **Associates** (non-voting, non-office holding) are men and women not eligible for Active or Service Membership who have demonstrated an interest in furthering AFA's aims and purposes, or in proper development and maintenance of US airpower.

ITS OBJECTIVES

To preserve and foster the spirit of fellowship among former and present members of the Air Force, and to perpetuate the identity and group solidarity of wartime Air Force units large and small.

To assist in obtaining and maintaining adequate airpower for national security and world peace.

To keep AFA members and the public at large abreast of developments in the field of aviation, and to stimulate community interest in Air Force activities and installations.

ITS OFFICERS AND DIRECTORS

ROBERT S. JOHNSON, President

Regional Vice Presidents: Edward R. Tufts (New England); George Hardy (Central East); Merle Else (North Central); Warren DeBrown (Northeast); Jerome Waterman (Southeast); Thomas Campbell (Northwest); Thomas Baker (South Central); Dr. John Biggerstaf (Midwest); James McCusker (Rocky Mountain); Ray Ireland (Great Lakes); William Hensley (Southwest); Thomas Stack (Far West). **Secretary,** Julian B. Rosenthal, **Treasurer,** Benjamin Brinton.

CARL A. SPAATZ, Chairman of the Board

Directors: Edward P. Curtis, James H. Doolittle, John P. Edmondson, Meryll Frost, B. E. (Shorty) Fulton, Frank O'D. Hunter, Arthur Kelly, Thomas G. Lanphier, Jr., Roy Leffingwell, Randall Leopold, Dr. W. R. Lovelace, Dr. Paul Potter, Robert Proctor, Mary Gill Rice, C. R. Smith, James Stewart.

CONTENTS

FEATURES

JIMMY STEWART TO SPARK WING-DING 12

START DIGGING, BROTHER! ..... By John F. Loosbrock 23

THE GREAT LESSONS OF KOREA
By Representatives W. J. Bryan Dorn and O. K. Armstrong 28

ALL WEATHER DEFENSE—HOW CLOSE ARE WE? 33

NEW RECON CAMERA 36

DEPARTMENTS

SHOOTING THE BREEZE 6
AIRPOWER IN THE NEWS 9
AIRMAIL 15
RENDEZVOUS 20
TECH TALK 36
TECHNIQUE 38
MOBILIZATION NEWS 41
AFA NEWS 45
AFA STATE ROUNDUP 48
AIRMAN'S BOOKSHELF 56

THE COVER

The cover photo is a kodachrome shot of the Northrop F-89 Scorpion reproduced by five-color process printing. The F-89 is the latest so-called "all weather" interceptor to roll off the production lines. The F-89 is a twin-jet job, packed to the gills with radar equipment that enables it to seek out and destroy targets when visibility is nil. It's in the 600-miles-an-hour-plus class, operable at an altitude of at least 40,000 feet. For more dope on our all weather interceptor progress

READ "ALL WEATHER DEFENSE—
HOW CLOSE ARE WE?" PAGE 33

AIR FORCE STAFF

JAMES H. STRAUBEL, Editor and Publishing Director

JOHN F. LOOSBROCK, Managing Editor — WILLIAM A. DEAN, Art Director

JAKE CULPEPPER, Associate Editor — HELENA REDMOND, Contributing Editor

AIR FORCE MAGAZINE is published monthly by The Air Force Association at McCall Street, Dayton 1, Ohio. **EDITORIAL OFFICE:** 1424 K St., N.W., Washington 5, D. C., Sterling 2305. Publisher assumes no responsibility for unsolicited material. **ADVERTISING OFFICES:** Main Office: 369 Lexington Avenue, New York 17, N. Y., Murray Hill 9-3817, Sanford A. Wolf, Advertising Manager. Western Area Advertising Office: David Shawe, 3974 Wilshire Boulevard, Los Angeles 5, Calif., Dunkirk 3-8976. Mid-West Office, Urben Farley, 120 So. La Salle St., Chicago 3, Ill. Financial 6-3074. **MAILING:** Re-entered as second class matter, December 11, 1947, at the post office at Dayton, Ohio, under the Act of March 3, 1879. **SUBSCRIPTIONS:** Membership in the Air Force Association, $4.00 per year, $2.50 of which is for 1 year subscription to AIR FORCE. Subscription rate to non-members, $4.00. Single copy, 35 cents. **REGISTRATION:** Trademark registered by the Air Force Association. Copyright, 1951, by the Air Force Association. All rights reserved under Pan-American Copyright Convention. Printed in U.S.A. **CORRESPONDENCE:** All correspondence pertaining to editorial matter and change of address should be sent to Air Force Association, 1424 K St., N.W., Washington 5, D. C.

"BIG FOUR"
provide U.S. Navy with "Balanced Power"

Experience with all four modern types of power for aircraft in one manufacturing plant is unique. Yet Douglas has that experience as the result of prudent, peace-time planning with the Navy.

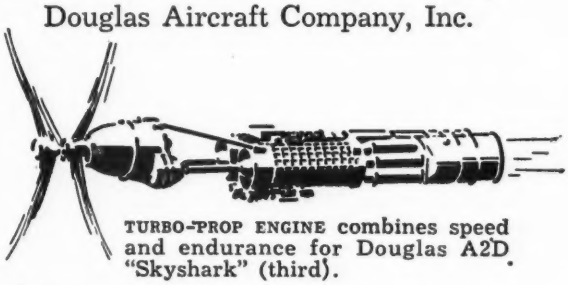
Best known of these Big Four is the AD-Skyraider. This reciprocating-engined attack bomber has been in production since 1946, and is now a battle-tested veteran after years of service with the Fleet.

In 1950 the twin-jet F3D Skyknight was started down the production line at El Segundo, following enthusiastic reports from Navy test pilots.

Now being flight tested in preparation for line production is the A2D Skyshark, turbo-prop attack plane. And above Edwards Air Base the rocket-powered D-558-2 Skyrocket is thrusting its needle-nose into the thin air, looking for scientific data that will help build newer type aircraft still in the classified status.

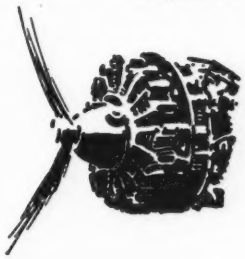
By carefully manipulating the design, development and production of these diverse power types, the Navy and Douglas have arrived at a flexible, "balanced power" position from which our air strength can be increased without delay.
Douglas Aircraft Company, Inc.

ROCKET ENGINE delivers supersonic speed for Douglas "Skyrocket" (top).

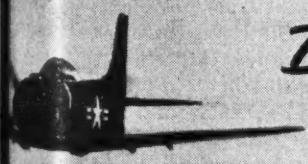


TURBO-PROP ENGINE combines speed and endurance for Douglas A2D "Skyshark" (third).

TWIN-JET ENGINE gives pure jet thrust for Douglas F3D "Skyknight" (second).



RECIPROCATING ENGINE provides work-horse efficiency for Douglas AD "Skyraider" (bottom).



Depend on **DOUGLAS**

Skilled engineers and technicians find Douglas a good place to work!

WORLD'S LARGEST BUILDER OF AIRCRAFT FOR 30 YEARS ➤ MILITARY AND COMMERCIAL TRANSPORTS
FIGHTERS ➤ ATTACK PLANES ➤ BOMBERS ➤ GUIDED MISSILES ➤ ELECTRONIC EQUIPMENT ➤ RESEARCH

SHOOTING THE BREEZE

The average company shows little reluctance in reporting to its stockholders on the favorable acceptance of its products, and the average stockholder shows no reluctance at all in admitting a corporation's best report is its dividend. Magazine publishing corporations and their stockholders are an exception.

To the average magazine firm and its editors the stockholder is one thing, the reader another. One is an owner, the other a customer. Few of the readers are stockholders and quite often, few of the stockholders are readers.

The Editor of this magazine faces a different situation. The publishing firm is a non-profit membership corporation in which each individual holds an equal share of stock, and every stockholder is a reader. The only dividend for the reader-stockholder is evidence of the product's widespread distribution and acceptance, for he has invested his money in annual dues and quite often his time in corporation work, for the sole purpose of spreading the word on a subject in which he believes—additional Airpower for National Security and World Peace. This magazine is his primary means for carrying out this objective. Therefore, the Editor submits this report on the March 1951 issue of AIR FORCE magazine.

There is another reason for the report. The March issue of the magazine prompted an unprecedented response from readers. Lacking space to publish all of the letters, the best we can do is quote a few representative ones and express our regrets that we cannot present them all. So it is that we offer this report not only as a dividend to our reader-stockholders, but also as an open acknowledgment to all those who have written us and have taken action on this issue of the magazine.

We use the term "taken action" advisedly, each month surplus copies of the current AIR FORCE, usually in packets of 25, are shipped to local leaders of Air Force Association and other members and they in turn send them on to people of influence in their areas and to state and national leaders, including newspaper editors and radio commentators, and their elected representatives. The magazines are usually accompanied by personal notes calling attention to pertinent articles in the issue. It is strictly a voluntary effort, and it is one way in which the individual member can actively participate in Association work and do his bit in support of adequate airpower. The report we receive regularly on this program testify to their huge cumulative effect. Certain magazine issues, of course, stimulate additional effect on the part of members. The March number, devoted entirely to a special report, "The Air-Ground Operation in Korea", provided such stimulation. Of the many reports received as evidence of this, the following three appear to be representative:

Wilbur H. Morrison, Scotia, New York, has submitted a newspaper clipping which presents, over almost one-half page a condensation of the Korean Report, and he has noted, "I put your story to good use. It appeared on the editorial page of the *Rome Daily Sentinel*, March 22, 1951. The paper has a circulation of sixteen thousand. The material in the magazine is being used as part of a speech to the Utica Kiwanis next week and will be covered in the Utica papers." From Savannah, Georgia, Brig. Gen. Haywood S. Hansell, Jr., Ret., Commander of the AFA Squadron in that city, has reported sending copies of the March issue with personal letters to Senator Richard Russell and Representative Carl Vinson, Chairmen, respectively, of the Senate and House Armed Services Committee, both of whom are elected representatives from Gen. Hansells' home state of Georgia. From Honolulu, Ray J. Leffingwell, AFA Wing Commander in Hawaii, has reported sending copies of the March issue to 30 people of prominence on the Islands, including members of the Board of Regents, University of Hawaii, and members of Hawaiian aeronautical concerns.

In addition to our regular monthly distribution of sixty-five thousand copies, we published twenty-five thousand extra copies of the March issue and forty-five thousand reprints for a total of one hundred thirty-five thousand copies printed of the special report, "The Air-Ground Operation in Korea." The reprints were pro-rated by strength and distributed throughout every command in the Air Force, and every unit of Air Force Reserve, Air National Guard and Air ROTC. Extra copies went to all Army, Navy, Air Force and Marine service schools for use as supplementary texts. The response from the schools is indicated in these representative comments.

The Command and General Staff College at Fort Leavenworth, Kansas, reported "The issues will be distributed to the officers of the Air Force section for their use in preparing and presenting instructional material." The Signal School at Fort Monmouth, New Jersey, commented, "this material will be of value not only to TSS students but to staff and instructors as well". The US Naval Postgraduate School at Annapolis said, "The report is most timely . . . our students here will derive a great deal of pertinent information from their copies." The Engineer Center at Fort Belvoir, Virginia, said, "Distribution has been made to our academic department for them as a reference in instruction," and asked permission to reprint the charts from the March issue "to be shown to our engineer officer students." Requests for additional copies of the issue were received from many other Air Force and Army installations including the Air War College at Maxwell Air Force Base, Alabama, and the Army Air Support Center at Fort Bragg, North Carolina. Extra copies were requested by individual officers working on air-ground operation reports.

The March issue became a popular text in Air Force ROTC classes. A few examples: At Syracuse University the instructor reported, "We are using The Air-Ground Operation in Korea as the basis of a sixteen hour course in applied airpower."

At West Virginia University the air-ground operational charts and graphs in the issue have been reproduced in larger size for use in

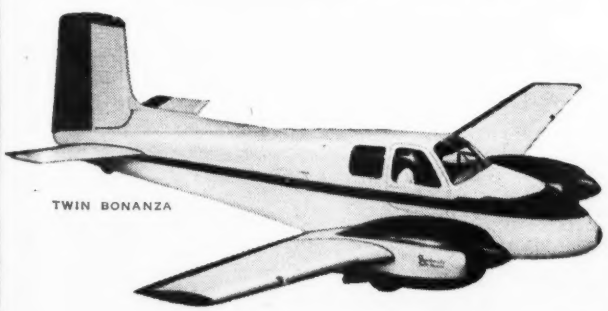
(Continued on page 16)

To help America build faster...there's a brilliant new star in the sky...the Beechcraft

Twin-Bonanza

Range, high performance and ruggedness make this newest Beechcraft right for business — and right for military service, too. Designed primarily as a super-roomy, five-place executive plane, capable of seating six for medium-range flights, the Twin-Bonanza is a superb "short-cut" for defense-busy executives. For military use, this *one* plane can serve as a personnel transport, twin-engine trainer, photographic, ambulance or cargo plane — with resulting savings in procurement and maintenance.

The Twin-Bonanza has the ruggedness and safety of its noted Beechcraft predecessors. Structural and operational standards are far in excess of government requirements. Your Beechcraft distributor has detailed information on this new Beechcraft. Check with him today, or write Beech Aircraft Corporation, Wichita, Kansas, U.S.A.



TWIN BONANZA

- Range at 60% power, 1,005 miles
- Top speed at sea level, 200 mph
- Cruising speed at 10,000 ft., 191 mph
- Rate of climb, 1,650 fpm
- Service ceiling, 20,400 ft.

BONANZA

Beechcraft

MODEL 18

BEECHCRAFTS ARE THE AIR FLEET OF AMERICAN BUSINESS

LOOK OUT BELOW!

Longer range... heavier armament for most effective close support fighter-bomber performance... greater speed... and higher ceiling for air to air combat.. ***THIS IS THE F84F!***

REPUBLIC AVIATION

FARMINGDALE, LONG ISLAND, N. Y.

Makers of the Mighty Thunderbolt • Thunderjet • XF-91 • **F84F**

AIRPOWER IN THE NEWS

VOL. 34, NO. 5 WASHINGTON, D. C. MAY, 1951

RESERVE OFFICERS comprise 71 percent of total officer strength in AF on active duty and over 72 percent of AF officers in FEAF are Reservists, according to Ass't AF Sec'y Hal Stuart. . . AF'S personnel strength objective has been set at 1,061,000, Gen. Vandenberg revealed during a House hearing on UMT last month. . . AF battle casualties in the Korean area through April 13 totaled 490.

THE AIR EVACUATION OPERATION of FEAF's 315th Air Division (Combat Cargo) is the greatest medical development of entire Korean war, Dr. E. L. Henderson, president of American Medical Association, stated after a recent visit to FEAF. . . Decrease of more than one third in the overall aircraft accident rate of Continental Division, MATS, for 1950 over 1949 has been announced. Major portion of time was consumed in the Pacific airlift. . . Number of US civilian airlines participating in Pacific airlift has been reduced to sixty with release of six commercial aircraft during March.

ADVISORY COMMITTEE of educators and businessmen to make a comprehensive study and evaluation of personnel utilization and training throughout the AF has been appointed by Sec'y Finletter. . . 296 graduates from 1951 classes of Annapolis and West Point have been nominated by Mr. Truman for AF commissions. Approximately 81 percent of the total will enter flying training. . . Chiefs of Air Staffs of Canada, France, United Kingdom and US will meet in Washington soon to review progress made by the air forces of the four nations.

EXISTING OR CURRENTLY CONSIDERED CIVILIAN EDUCATION AND TRAINING FACILITIES of the Army, Navy, Marine Corps and USAF have been determined adequate by Defense Department for present emergency. . . AF Flying Training Air Force, with headquarters at Waco, Tex., has been set up to handle training of pilots and crews. Organization will be under command of Maj. Gen. Warren R. Carter. . . Garner Aviation Co., Richmond, Va., has been invited by USAF to enter into contract negotiations for operation of a basic pilot training school at Bartow, Fla. . . AF is opening six air-crew classification testing centers to provide centralized facilities to determine aviation cadet applicant's reaction to flight conditions.

FIRST NAVIGATOR-BOMBARDIER TRAINING VERSION OF BOEING B-50, TB-50D, or "Flying Classroom," has been delivered to USAF.

COMPREHENSIVE EDUCATIONAL AND TRAINING PROGRAM is being conducted by Ninth Tactical AF and Army Air Support Center, Ft. Bragg, N. C., to teach all tactical AF and Army units the advantages and operational techniques of air support. . . USAF has activated its first Air Resupply and Communications Wing at Mountain Home AF Base, Mountain Home, Idaho. . . Cantonment Area of Beale Bombing and Gunnery range, Marysville, Calif., has been transferred by USAF from Air Training Command to ConAC for purposes of training Aviation Engineer units.

REDESIGNATION OF GREENVILLE AF BASE, Greenville, S. C., as Donaldson AFB in honor of a World War I Ace, has been approved by Gen. Vandenberg. . . Lake Charles, La., air base will be reopened by AF for use by SAC. . . AF will

(Continued on page 10)

take over Wichita Municipal Airport for use in training Boeing B-47 jet bomber crews. . . A $120,000,000 expansion program is to be carried out at Edwards AF Base, Muroc, Calif.

SUBCONTRACTOR CLINICS in Chicago, Boston, Detroit, Los Angeles and Fort Worth will be conducted in near future to demonstrate USAF needs. . . New procurement policies for Department of Defense have been adopted that provide for maximum aid for American small business to participate in re-arming program. . . A revision of "Index of Military Purchasing Offices" intended as a guide to industry in selling to the military departments, has been issued by Munitions Board. Request for copies should be made to Central Military Procurement Information Office, The Pentagon.

CHAPLAIN (CAPTAIN) FRANK L. WHITE, one of USAF's 15 Negro chaplains, has been awarded the Commendation Ribbon for outstanding and meritorious service with 822nd Engineer Aviation Battalion in Korea.

PROCUREMENT OBLIGATIONS during first nine months of current fiscal year totaled $19.2 billion for hard goods (aircraft, ships, tanks, weapons, ammunition and other equipment). . . $20 million in revenue from armed forces this year is expected by airlines with more than half coming from AF.

ROYAL AIR FORCE personnel strength will total some 230,000 men this year. . . Approximately $917.6 million is the RAF estimate for 1951-52. . . Air Marshal Sir William Elliot has arrived in Washington to succeed Marshal of RAF Lord Tedder as chairman of British Joint Services mission here and British representative on North Atlantic Treaty Organization.

JACKIE COCHRAN last month set a new world speed record for propeller-driven planes when she piloted her F-51 Mustang back and forth across an officially certified straightway 16 kilometer course for an average speed of 469 miles per hour.

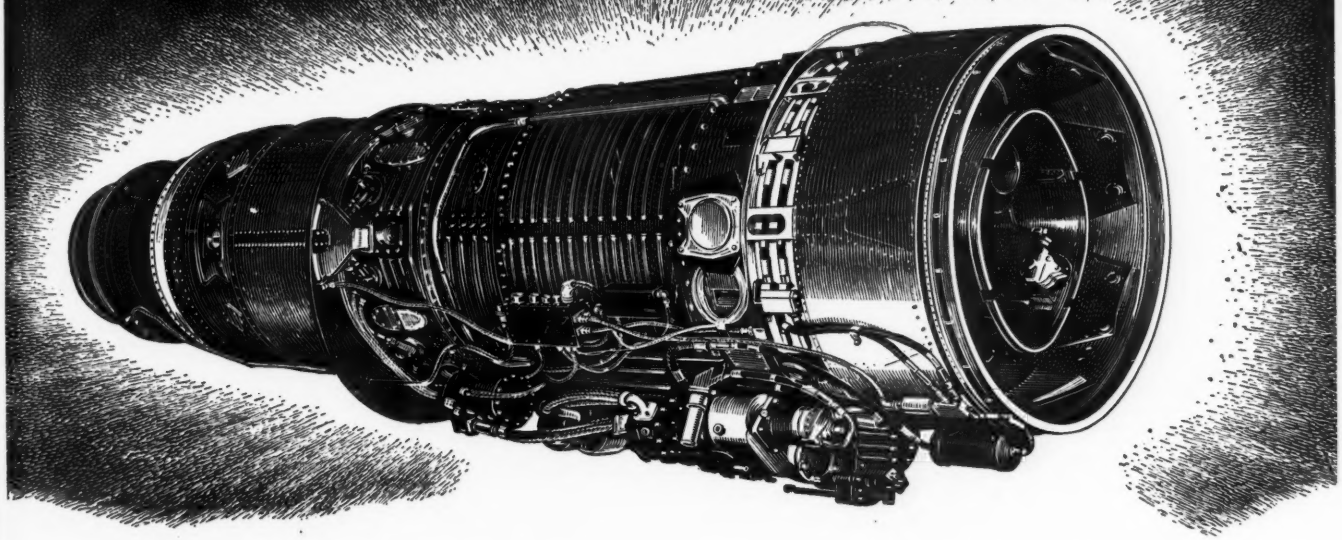
W. STUART SYMINGTON, former AF Sec'y and recently Chairman of NSRB, has been named by Mr. Truman to head the Reconstruction Finance Corporation. Tom Lanphier, former AFA president who has been serving as special assistant to Symington at NSRB, has left Washington to accept a position as Special Assistant to the President of ConVair in San Diego. . . John F. Loosbrock, formerly Washington Editor of POPULAR SCIENCE, is now Managing Editor of AIR FORCE Magazine. . . Bob Fleischer, Ass't Managing Editor of AIR FORCE Magazine for the past two years, has resigned to accept a public relations position with 20th Century-Fox in New York City.

NATIONAL CAP EXECUTIVE BOARD has gained Sec'y Finletter's approval of its recommendations submitted for improvement of CAP structure. One of the main points approved by USAF was access to AF enlistment for CAP members regardless of recruiting limitations. (Action by Selective Service is required on this item.)

A SPECIAL ORDER put USAF officers, regardless of rank, instead of airmen to work policing up the Turner AF Base, Albany, Ga., one day last month, AP has reported.

MAJ. GEN. EDWARD A. CRAIG, who saw action in the Korean War, has taken over as Director of Marine Corps Reserves.

Allison Wins Record U.S. Air Force Contract for Super-Jet Engines



New Turbo-Jet Leads with Greatly Increased Power and Fuel Economy

ONCE more Allison makes a major contribution to America's air power—a new Super-Jet aircraft engine that excels in power and fuel economy any other jet engine ever released for production.

It's the new J35-A-23 developed in cooperation with the Air Materiel Command—a completely new design—yet retaining the same basic diameter of the famed J35 series. This new engine develops more power per square foot of frontal area than any other jet yet produced. Four of these new engines will be installed in the YB-47C Boeing Strato-Jet. They will produce more power than the six jet engines now used in previous models of the B-47 series.

This J35-A-23 now has been selected by the Air Force—in open competition—for a record-size production contract. Behind this latest award is Allison's unequaled experience in the design and production of more than 10,000 jet engines with total time in the air of over 700,000 hours.

This accents the length and breadth of Allison jet engine experience where it counts most—in the air. Many of these flight hours have been accumulated in Korea powering U. S. fighters for support of ground troops and keeping the skies clear of enemy opposition.

Production will continue at Allison on those combat-proved types of jet engines in addition to the new J35-A-23 Super-Jet and the new T40 Turbo-Prop engines.

The record production order for the new Allison engineered Super-Jet will be met through the combined facilities of Allison and the Chevrolet Motor Division which will build a substantial quantity of these Super-Jets.

GM
GENERAL MOTORS

Builders of J35 Axial, J33 Centrifugal Flow Turbine Engines and T40 Turbo-Prop Engines

Allison

DIVISION GENERAL MOTORS CORPORATION
INDIANAPOLIS, INDIANA

"DEFENSE IS EVERYBODY'S BUSINESS—AIR POWER IS EVERYBODY'S PROTECTION"

Jimmy at AFA's 1948 Wing-Ding in New York.

Jimmy Stewart to Spark Wing-Ding

Famous movie star will serve as chairman for the big entertainment event in Hollywood Bowl highlighting AFA's Fifth Annual Air Force Reunion and Convention in August. Tex McCrary will direct the show

THE Air Force Association's Madison Square Garden "Gang" will again be on hand for the big Wing-Ding at the Hollywood Bowl which will kickoff the Fifth Annual National Air Force Reunion and Convention in Los Angeles.

This huge entertainment program on the night of August 24 will feature many of the same stars of screen, radio and television who staged AFA's famous Wing-Ding in Madison Square Garden in 1948—the event which has become known as the "greatest show ever put on in the Garden."

Hollywood's Jimmy Stewart, a national director of AFA since it was founded, who shared MC honors at the 1948 Wing-Ding with Bob Hope and who contributed so much to the success of that program, has agreed to serve as AFA's 1951 Wing-Ding Chairman.

Stewart's acceptance of the job came last month in a letter to General Carl H. Spaatz, AFA's Chairman of the Board, who is organizing the California Reunion and Convention for the Association. General Spaatz goes to Los Angeles this month for pre-Convention meetings with civic leaders of the area. At the New York Wing-Ding in 1948, he was on stage to take part in the award ceremonies.

Tex McCrary, who directed the Madison Square Garden show, along with Broadway producer Joshua Logan, will serve as Director of the Hollywood Bowl Wing-Ding. With him will be his wife and television partner, Jinx Falkenberg, who was one of the stars of the New York Wing-Ding. Working with the McCrarys in the Bowl production will be Tom Lanphier, who, as AFA's National President for 1948, was the man behind the Garden Wing-Ding.

With the Garden "gang" assuring the success of the entertainment end of the Convention, plans were stepped up last month to handle its reunions of wartime Air Force units, its forums, business sessions and airpower banquet.

AFA Wing-Ding veterans, Tex McCrary and Jinx Falkenberg will be on hand to help make the Los Angeles show a success.

HIGH PRAISE FOR LOW TENSION

American Airlines
Braniff Airways
Capital Airlines
Chicago & Southern Air Lines
Continental Air Lines
Delta Air Lines
Eastern Air Lines
Mid Continent Airlines
National Airlines
Northeastern Airlines
Pan American World Airways
Slick Airways
Trans World Airlines
United Airlines

U.S.A.F.—U.S.N.—M.A.T.S.

ENDORSED BY LEADING AIRLINES

No American enterprise sets for itself more exacting standards than the airlines of the nation. Their quest for betterment in service, safety and dependability is literally unceasing. The adoption of Bendix Low Tension Ignition by so many important airline operators is perhaps the finest tribute that could be paid to this new and revolutionary ignition system. Before Bendix low tension system was offered to the industry it was subjected to the most exhaustive tests under all operating conditions. The results in terms of efficiency, economy and all around dependability were so pronounced that we felt justified in announcing our new concept as "The most significant step forward in the history of aircraft ignition." That this introductory statement was no exaggeration has been amply demonstrated by the wide and ready acceptance of Bendix low tension systems by America's most critical buyers, the airline operators of the nation.

Write for an interesting booklet entitled "Current Aircraft Engine Ignition Systems."

Bendix

SCINTILLA MAGNETO DIVISION OF

SIDNEY, NEW YORK

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

Bendix AVIATION CORPORATION

FACTORY BRANCH OFFICES:

117 E. Providencia Avenue, Burbank, California • 23235 Woodward Avenue, Ferndale, Michigan • 7829 W. Greenfield Avenue, West Allis 14, Wisconsin
582 Market Street, San Francisco 4, California

TEMCO's Five-Year Growth Outstanding in Aircraft Industry

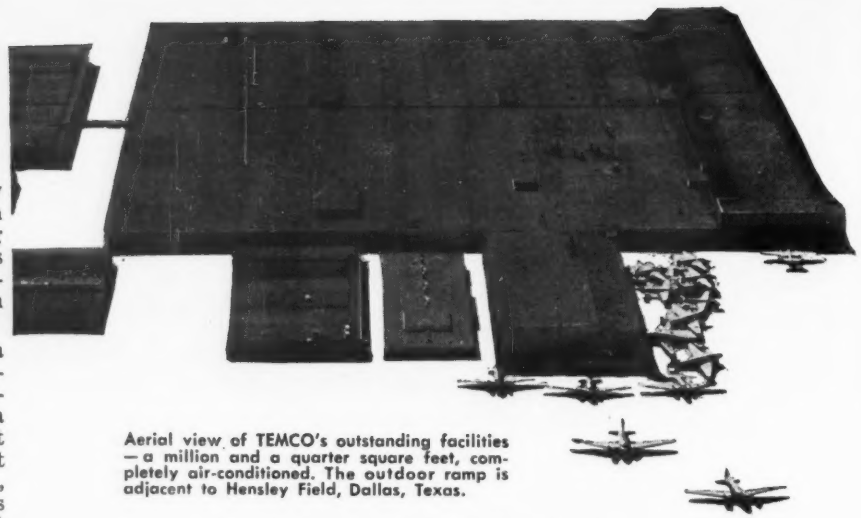
Founded in Dallas six years ago by executives of the Texas Division of North American Aviation, Texas Engineering and Manufacturing Company's growth is the direct result of the ability and experience of its founders and the organization they have built around them.

Starting at the end of the war with a nucleous of highly skilled aircraft technicians and one of the most modern facilities in the aircraft industry including a 3,000-ton hydro press—one of the largest in the Southwest — and three different types of stretch-forming presses, TEMCO has constantly expanded its organization and equipment to meet growing demands for its services. Recently, it entered into a facilities contract with the Navy Department for the supply of a full complement of equipment adequate for the manufacture of military aircraft which will make it possible to increase production to the full capacity of the building area, and which within the next few months, will make TEMCO one of the top aircraft manufacturing plants in the country.

TEMCO's early projects included the manufacture of the Fairchild F-24, the Swift personal plane, and more recently, a trainer of its own design and manufacture, the TEMCO T-35 Buckaroo, Y-models of which were delivered to the U.S.A.F. in 1950.

One of TEMCO's first major jobs was the manufacture of large sub-assemblies for the Fairchild C-82 Packet. Currently TEMCO is working on major assemblies for Lockheed and Boeing plus the modification of an undisclosed number of F-51 Mustang Fighters and C-54 Flying Hospitals.

Now employing upwards of 4,000 people and constantly increasing, TEMCO has one of the highest payrolls in the Dallas area.



Aerial view of TEMCO's outstanding facilities — a million and a quarter square feet, completely air-conditioned. The outdoor ramp is adjacent to Hensley Field, Dallas, Texas.

TEMCO

ENGINEERS AND MANUFACTURERS FOR THE AIRCRAFT INDUSTRY

Production Ingenuity Highlights TEMCO's Manufacturing Methods

Selected by U.S.A.F. as one of the major overhaul facilities for planes on the Berlin Air Lift, TEMCO for the first time in the history of the aircraft industry set up overhaul work on a production line basis. The ability to design tools and manufacture thousands of scarce spare parts plus a production line ingenuity for developing new techniques and methods contributed to TEMCO's reducing the overhaul time on a C-54 by 42 per cent. This resulted in the saving of thousands of hours of time and hundreds of thousands of dollars.

Complete Accessory Shops a TEMCO Feature

TEMCO's accessory shops are specially equipped and designed for testing and overhaul of propellers, radio and radar equipment, instruments and hydraulic assemblies for military and transport aircraft. These shops are completely air-conditioned, with the radio and radar shop shielded and dust-free.

Starting in 1945 with an idea and a wealth of experience, some determined people, former executives of the Texas Division of North American Aviation, founded Texas Engineering and Manufacturing Company, Inc.

Known as TEMCO in the Aircraft Industry it has in five short years grown to a place among the leaders in the engineering and manufacture of aircraft. Production ingenuity and manufacturing facilities have resulted in TEMCO being selected to build, in increasing quantities, major assemblies and parts for Boeing Airplane Company, Lockheed Aircraft Corporation and other manufacturers.

TEMCO
TEXAS ENGINEERING AND MANUFACTURING CO. Inc.

Texas Engineering and Manufacturing Co., Inc.

DALLAS, TEXAS

AIR MAIL

An AF Reservist Writes

Gentlemen: Keeping abreast of Air Force policy, advancement and developments in national and international affairs has become a steady habit with me. Of all the periodicals I receive, none receives a fraction of the attention that my monthly edition of AIR FORCE Magazine does. It's very difficult and often impossible to convince those skeptics of Air Force position of the importance of the organization in present-day affairs. Many still cling to the idea that sloppy hats, brassy uniforms and parties are the Air Force. If this type of individual could be made to read

General Carl Spaatz's feature article in the April issue of AIR FORCE Magazine, I feel certain that their impression of the Air Force would most certainly be changed for the better. The General's article should reach far beyond the Air Force Association to help convince those in whose hands future policies concerning the expansion of the Air Force is placed. My own issue of AIR FORCE Magazine with the General's article in it will pass through many hands, especially those of opposers of the Air Force policies with whom I have personal contact.

I felt a slight case of repentance when I received a reply from Congressman Van Zandt to a letter I sent him concerning your quote in a recent issue. Your most recent reply to him removed all that feeling, and I hope that the policy of the magazine staff will continue to follow the lines that the reprimand of the Congressman from my state received. Local newspapers cannot keep the public informed of all congressional opposition to Air Force issues, but AFA, I feel, should be able to keep its members well informed.

1st. Lt. Gerald W. Vath, USAFR
PIO, Flight "A", 9544th VARTS
Reading, Pa.

• *General Spaatz' article was quoted almost in full on floor of Senate to support a resolution introduced recently by Senator Kem of Missouri as an amendment to the Troops-to-Europe bill. The resolution called for the joint Chiefs of Staff to certify to the Congress that ground forces sent to Europe would be assured of adequate airpower.* Reader's Digest *has requested permission to quote a condensed version of the article in one of its forthcoming issues.*

Old Pilots Fade Away

Gentlemen: As a Regular officer, who with all air-minded people, is intensely proud of and grateful for the splendid contributions you have been making towards bringing an understanding of the fundamentals of airpower to the nation, I speak my piece concerning your article, "How Old Can You Jet", with all the objectivity of which I am capable, but nonetheless with some regret at what I believe to be an unfortunate bias in the inferences of the article.

Let us first leave the Regular AF, the ANG and the USAFR out of consideration and talk in terms of an AF which will require every atom of its qualified or qualifiable skilled resources, regardless of component, to meet the challenge of its mission. The only official position of AF with which I am familiar characterizes the experience level of our pilot resources as perhaps the most devastating "secret weapon" in the air arsenal. However, we would be sadly remiss if we then relaxed complacently and assumed that this would remain true for all time. The greatest part of the 195,000 pilots trained in WW II have not been able to keep current on military type aircraft for a variety of reasons. Some of those who have come back to duty with highest of motivation have of their own volition requested relief from flying. This is said with no criticism whatsoever, but with recognition that men do grow older.

The job of the AF is in no wise that of establishing arbitrary age cut-offs. It is on the contrary that of fostering the receding resources of an earlier war to provide the leadership essential to decisive air operations in another war. This job necessarily compels us to plan on

the non-availablity for active combat of many of our WW II vets as of three, five or seven years hence and a compensating program for the training of new men and their maximum seasoning within the time that is to be allowed us.

I assure you as one of the officers involved in the complex task of keeping our human resources adequate to our critical responsibilities, that our experienced pilots are high among our most precious assets. Being in the oldster category, it would do my heart good to see a white beard on the ace of aces list of another war, should it occur, but in logic I must conclude that such a reality would probably be the exception that proves the rule. My hearty congratulations for the thought provoking editorial policy you are following.

Colonel Lloyd P. Hopwood
Washington, D. C.

Bull Session

Gentlemen: I am a member of AFA and receive the monthly magazine on schedule every month. As a small fixed base operator, you do not realize how it keeps me up on the latest regarding

our Air Force in helping make intelligent conversation with visiting military pilots and Air Force personnel.

James L. McCarthy
McCarthy Aviation Service
Stevens Point, Wis.

Publicizing Reserve Poop

Gentlemen: I should like to add that I thoroughly enjoy each issue of AIR FORCE Magazine—since the outbreak of the Korean War, the Mobilization News Department is especially interesting to those of us in the Air Reserve.

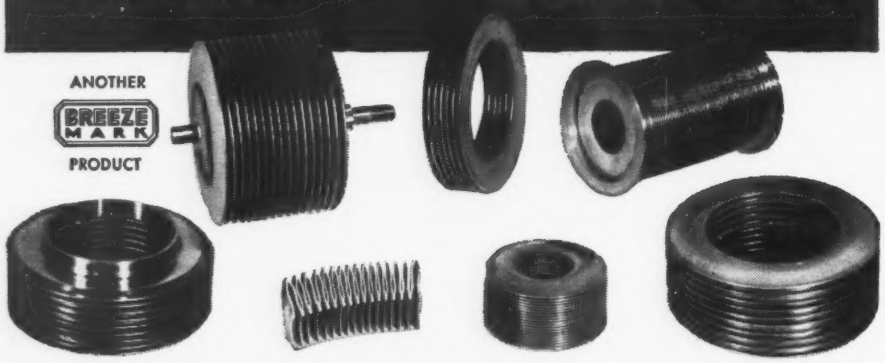
R. W. Kemper
Hibbing, Minnesota

Gentlemen: I would like to congratulate you and thank you for the very fine and straight forward magazine you are publishing for the benefit of the former Air Force people. The Air Force doesn't seem to want us informed as to what the future holds for their inactive reserves. Your magazine has done more to give us the "poop" than any other organ including the official Reserve bulletin.

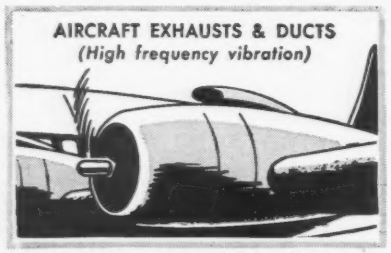
I. W. Misenheimer, Jr.
Chester, S. C.

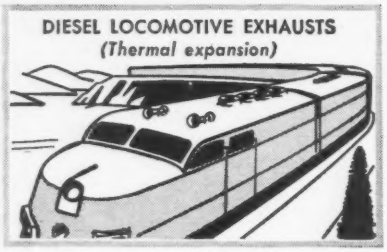
• *Mobilization News in this issue contains a blueprint of the long-range program proposed for Reserve forces.*

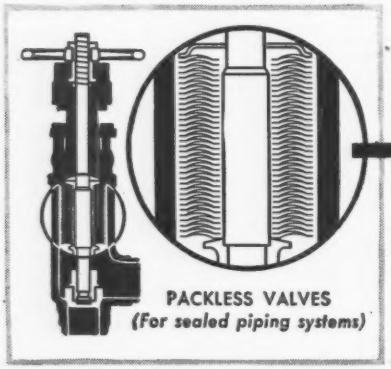
BREEZE Job-Engineered BELLOWS



...Give LASTING PROTECTION Where Ordinary Bellows Fail







Breeze welded diaphragm bellows meet the operating life cycle of any equipment in which they are used *because every Breeze bellows design is individually engineered and built for the job.*

Breeze has no "stock bellows," but if you have a vibration problem in ducts, large or small, or want permanently sealed valve enclosures in any type of piping system, or need bellows for torque transmission or other uses, Breeze experience can quickly provide the answer . . . and production can meet your requirements.

A Breeze bellows is dependable because each diaphragm is designed to work well within its elastic limit. This is accomplished by thorough analysis of each application and careful design of the bellows to withstand all requirements. "Job engineering" each individual type eliminates makeshifts, assures efficient performance.

Breeze bellows are made in stainless steel, inconel, monel, nickel, steel, or other weldable alloys.

Feel free to consult us without obligation on your existing bellows requirements, or any other project where reliable welded diaphragm type bellows might solve a design problem.

BREEZE CORPORATIONS, INC.
41-X South Sixth Street, Newark 17, N. J.

OTHER BREEZE PRODUCTS: ACTUATORS · RADIO SHIELDING · AERO-SEAL HOSE CLAMPS

special exhibits. The University of Oregon reports, "The reprints will be used as texts in ROTC instruction in a course on air-ground teamwork".

At Texas A&M the Air ROTC instructor said, "We have utilized the information in a press release to the school paper, as well as in talks to various Air Force and Air Force Reserve organizations in this area".

From Ottawa, Canada, *The Rondelle,* official service journal of the Royal Canadian Air Force, requested permission to reprint in its entirety "The Air-Ground Operation in Korea" as a special issue of the RCAF's magazine, which would be devoted entirely to this report from AIR FORCE.

Perhaps the most appreciated reaction from within the service was that which came by cable from Far East Air Force Headquarters in Tokyo. It read, "Congratulations on magazine's special issue. Extreme interest in magazine indicates no extra copies will remain."

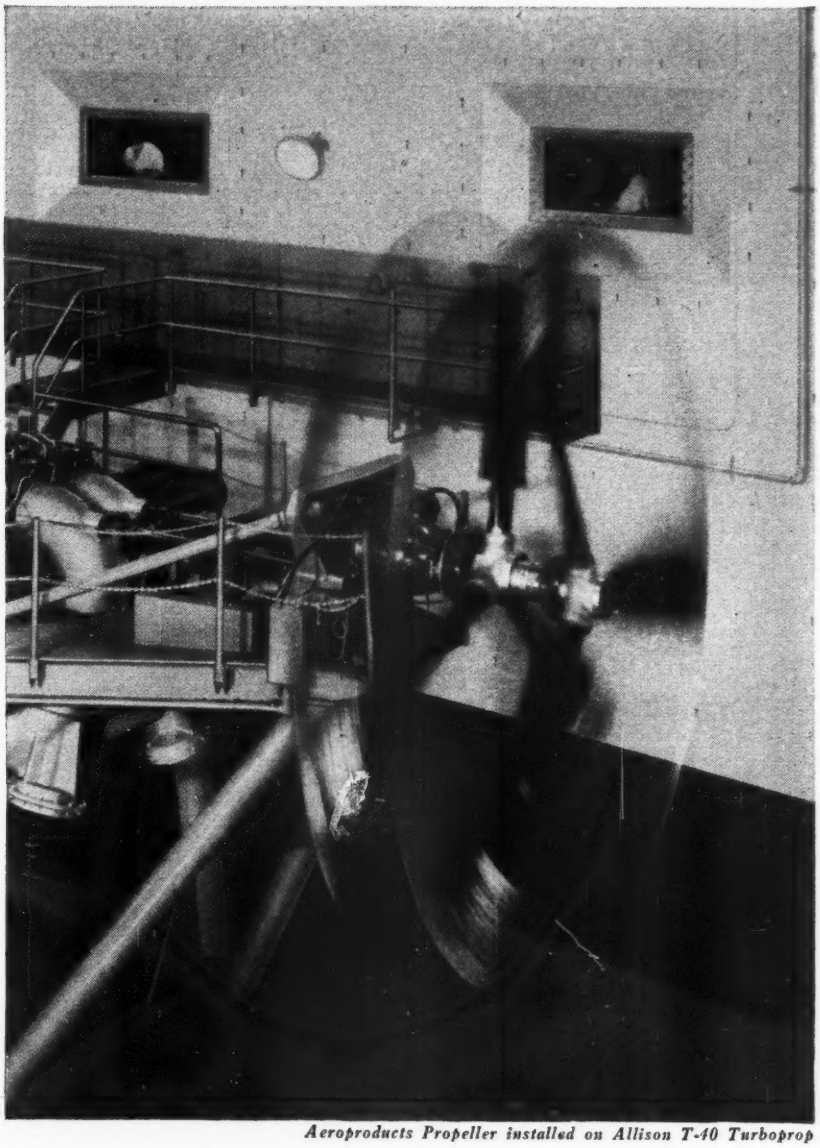
In Congress the reaction was equally stimulating. Copies were sent to each member of Congress along with a letter from Air Force Association President, Robert Johnson, calling attention to the air-ground report. The many replies from Congressmen revealed the great need for the information contained in the report and the interest in receiving such information. This interest stimulated Congressmen Dorn of South Carolina and Armstrong of Missouri to make a special trip to Korea (see page 28). These legislators have reported, "the misconceptions regarding this Korean effort surely have been instrumental in presenting a realistic approach to our mobilization effort. It was not until the special report, 'The Air-Ground Operation in Korea' in the March issue of AIR FORCE magazine that our legislators and the public could properly appraise airpower in this war".

Millions of newspaper readers received the information. The United Press wire service reports on the issue were widely distributed. Fulton Lewis, Jr.'s much-read syndicated column devoted to the Korean Report led off with the comment, "Heavy groaners over alleged Air Force tactical failures in Korea aren't making so much noise now. One of the reasons is that comprehensive report published by the authoritative Air Force Association, trimming some of the lard from behind the ears of the 'fly boy' critics." Jim G. Lucas, Scripps-Howard columnist, wrote a

(Continued on page 19)

First to harness dynamic turboprop power!

Aeroprop



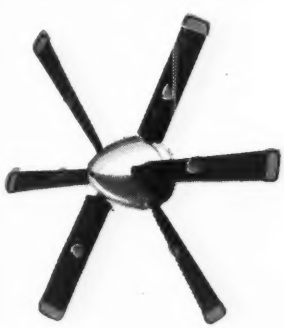
Aeroproducts Propeller installed on Allison T-40 Turboprop

A new day has dawned in the history of flight—the day of turboprop power!

For the dynamic combination of turboprop engines and Aeroprops opens up a great and new era when cargo ships, bombers and fighters will fly at near- or super-sonic speeds.

And they'll fly with range and performance that until now have been only a dream—a dream brought to life on the drawing boards of the men at Aeroproducts.

Aeroproducts, working in close contact with the Navy and Air Force, has pioneered propeller design for turboprop power . . . has, by its research and never-ending experimental work, blazed the trail of propeller driven supersonic speed for all others to follow.



December, 1945—a dramatic milestone in the development of turboprop power! For it was then that the Convair F-81 was flown, first Air Force fighter using turboprop power. And from these tests came knowledge for the development of Aeroprops for new planes that utilize the full power, the enormous thrust of the turboprop engine and Aeroprop combination—and set wonderful new standards of aircraft performance.

AEROPRODUCTS DIVISION
GENERAL MOTORS CORPORATION
DAYTON, OHIO

GM
GENERAL MOTORS

Building for today
Designing for tomorrow

Aeroproducts

AEROPRODUCTS GM

What is it?

it's a Cessna L-19!

"Enemy concentration spotted at grid coordinates 0276-2145." Seconds later friendly artillery knocked it out. An L-19 reported the enemy location! The new U. S. Army Observation Reconnaissance plane is especially designed to do a tough and important job. It's the "eyes" of the Army—an elevated observation tower in constant radio communication with supporting ground units.

Cessna engineers built it to meet all the Army's exacting requirements. They gave it all-metal construction for rugged durability. They gave it excellent visability in all directions, unusually low noise level and remarkable slow-flight characteristics—to suit it for observation work. They gave it safety spring steel landing gear, high lift flaps and ample reserve power —so it could take off from or set down on unprepared, front line fields.

KEEP YOUR EYES ON THE "EYES" OF THE ARMY
. . . THE CESSNA L-19

special feature on the issue.

The *New York Journal-American* spread the chart showing "How the Air-Ground Team Operates in Korea," across eight columns over an article on the issue by its aviation editor, George Carroll. Julian Hart, aviation editor of the *Los Angeles Examiner,* gave it a special feature. The influential *Washington Post* made it the supplement of a full length editorial.

Copies of the March issue and accompanying letters were sent to leaders and Security Committee members of the American Legion, Veterans of Foreign Wars, AMVETS, to key aviation columnists and city editors, and leaders of the aviation industry, and many others.

Representative individual comments include—from H. I. Welch, Minneapolis, Minn., "I have found the issue very helpful in lecture work before our air-ground group"; from John R. Anderson, Chicago, "This should be must reading for all Americans, including our government representatives in Washington. To that end, I am writing my Senators and Representatives from the State of Illinois, recommending this issue to them"; from Representative F. Young, Boston, "as an infantryman I am particularly impressed with the excellent material on the employment of tactical air. More articles of this nature would certainly give us doughboys a clearer understanding of the role of the Air Force and its relation to us"; from Ray S. Ryan, Minneapolis, "I would like these extra copies to get into the hands of some of my friends who should know better but who have been a little confused"; from Lt. Col. A. W. Parrott, attached to RCAF at Edminton, Alberta, Canada, "I was approached last evening at the Edmonton US Institute by both Air Vice Marshal C. R. Dunlop (RCAF) and Air Vice Marshal K. McGuthrie (RCAF) with the request for an additional copy of the March AIR FORCE magazine. Both officers had seen my personal copy of the March issue and they were very impressed with the article pertaining to the employment of tactical airpower in Korea; from Mrs. Ward Hitt, Kansas City, Kansas, "We are especially interested in this issue because our son has just finished a twenty-one day tour of duty in Korea as a tactical forward control officer." And these are only a random sample.

James H. Straubel,
Editor

The AVITRUC XC-123

RELIABLE

ARMED FORCES DAY

Every day is ARMED FORCES DAY at Chase. Outstanding engineering skill, tried and proven materials and equipment, plus highest workmanship standards have produced the remarkable AVITRUC troop and cargo carrying transports for defenders of our Democracy.

Chase AIRCRAFT CO., Inc.
WEST TRENTON, NEW JERSEY
STROUKOFF AVITRUC

ALLISON RADAR

NAVIGATIONAL AID
For MULTI-ENGINED
TRANSPORT AIRCRAFT & HELICOPTERS

MILITARY—CIVIL

SMALL—COMPACT
LIGHTWEIGHT

EFFICIENT

SEES Thru FOG
DAY and NIGHT

- Sees Thunderstorm Cores, Snow, Hail, Rain in advance.
- Promotes smoother flying for passenger safety and comfort.
- Warns of approaching aircraft in line of flight.
- Sees obstructions in true outline and/or direction.

ALLISON
RADAR CORPORATION
11 W. 42 St., N. Y. 18 PEnn 6 5811-12

SPECIAL AUTOMOBILE FINANCING SERVICE AND LOANS

To Commissioned Officers and Warrant Officers Wherever Located

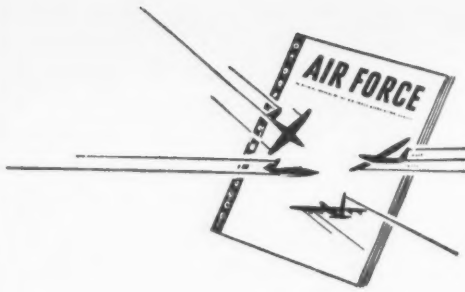
This organization founded in 1924 by a group of retired officers specializes in rendering financial assistance to officer personnel at the lowest possible rates.

Minimum Restriction on the Movement of Cars Overseas

FEDERAL SERVICES FINANCE CORP
Home Office
718 Jackson Place Washington 6, D. C.

REPRESENTED AT:

Federal Services, Inc. 7024 Wisconsin Ave. Bethesda, Maryland (unsecured loans only)
Martin Bldg. Columbus, Ga.
31 Navy Bldg. Pensacola, Fla.
Ocean Center Bldg. Long Beach, Calif.
227 Franklin St. Fayetteville, N. C.
1410 Kapiolani Blvd. Honolulu, T. H.
Wynne Bldg., Highway #70 Havelock, N. C.
615 Marion Building Augusta, Georgia



RENDEZVOUS

Where the Gang gets together

UNIT HISTORIES: N. Y. Public Library's Office of Military History has largest collection of World War II unit histories. As Library plans to publish a definitive edition of the list, it would welcome information of unit histories, particularly those printed overseas and those by small printing firms. *C. E. Dornbusch, N. Y. Public Library, 5th Ave. and 42nd, New York 18, N. Y.*

BOMBARDIER SONG: Since my discharge from Air Force, I've been trying to purchase a recording of "The Bombardier Song." Suggestions would be appreciated. *Harvey W. Luedtke, 1236A, North 25th St., Milwaukee 5, Wis.*

SATAN'S ANGELS: Would like to obtain a copy of 475th Fighter Group history entitled "Satan's Angels." *Edward P. Rood, Clinton, Maine.*

MISSING ISSUES: Still trying to locate three copies of old AIR FORCE Magazine issues to complete my collection. Those needed are November, 1943; January, 1944; and July, 1946. Name your price. *Roy G. Smith, 3794 So. 5th E., Salt Lake City 15, Utah.*

CALLING CHUCK: I'm trying to locate Charles "Chuck" Wilt. Saw him last at Primary Pilot School, Camden, South Carolina, in 1943. He hails from somewhere around Altoona, Pa. *Joseph Weglinski, 21 Spruce St., Poughkeepsie, N. Y.*

CULLUM'S REGISTER: West Point graduates who have not yet received the Superintendent's request for information on your record since graduation, please contact Editor, Cullum's Biographical Register, West Point, and a form will be forwarded by return mail. *Col. Charles N. Branham, USA, Ret., U. S. Military Academy, West Point, N. Y.*

LIBERATORS: Anyone who knows where I can buy, beg, borrow or requisition a copy of "Liberators over Europe," the history of 44th Bomb Group, please contact me. *Merritt E. Derr, 228 Main St., East Greenville, Pa.*

REUNION COOKING: Class 41-E Stockton Field, Calif.—10 year reunion cooking for 13, 14, 15, July 1951. Contact *Roger W. Stinchcomb, Jr., Greenville, Texas.*

SNAPSHOTS: Would like to obtain pictures of some of my old Air Force buddies. The names are: Robert Howley, Spokane, Wash.; Edgar "Tex" Muirhead, Waxihachie, Tex.; Robert Stickel, Moline, Kans.; Lt. Nesbit, Bombardier from Texas; Lt. John Scarborough, Lake Charles, La.; and Lt. L. M. Beau, Wichita, Kans. *Charles Laudells, 511 Port Ave., Lyndhurst, N. J.*

MORE REUNION: 388th Bomb Group (H) Ass'n. formed in convention assembled at French Lick, Ind., in July 1950 will hold second annual reunion at Deshler-Wallick Hotel, Columbus, Ohio, on July 6 and 7, 1951. Informal get-together party will take place on evening of July 5. Former members of this group may obtain reservations or additional information regarding this reunion by contacting *Robert L. Pfeiffer, Convention Chairman, Deshler-Wallick Hotel, Columbus, Ohio.*

ATC-CBI: Could you please advise me if there ever was published any kind of a history on the Air Transport operations in the CBI theater during World War II, and if so, where may I obtain a copy of it? I served with 13th Ferrying Squadron, later enlarged and changed to 29th Transport Group. *Ted Solinski, Lexington Herald-Leader, Lexington, Ky.*

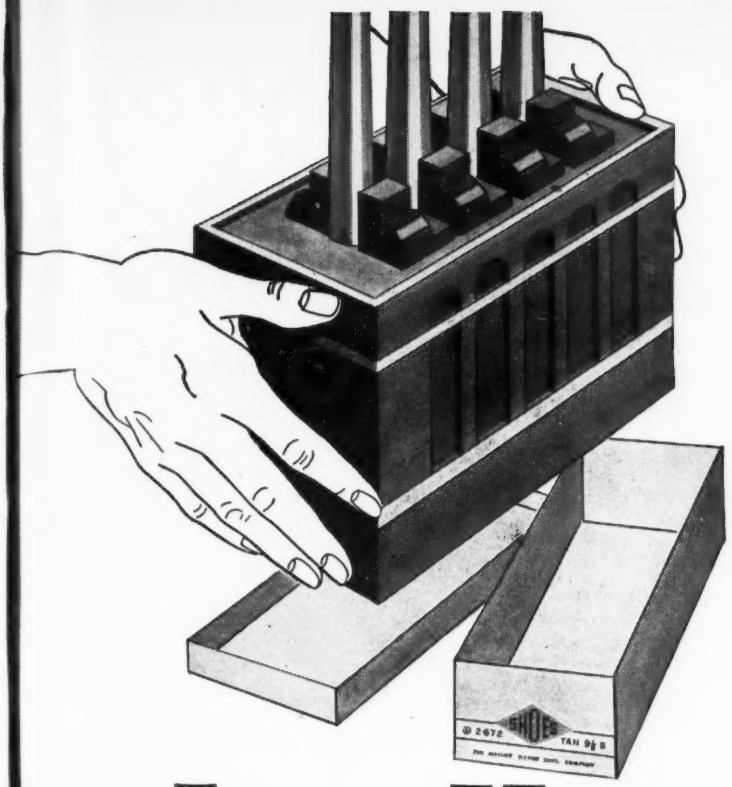
WHERE'S MONTY AND PHIL?: Request location of Capt. John D. Montgomery, S/Sgt. Phil B. Shimmel or any other member of 340th Bomb Group, 489th Bomb Squadron. Does anyone know of a planned reunion of that outfit? Please contact *T/-Sgt. James K. Alford, USAF 14051408, Route #7, Greenville, S. C.*

L. A. IN AUGUST: A reunion of former 780th Bomb Squadron members is planned to be held in Los Angeles the weekend of August 24, 25 and 26 in conjunction with AFA's Fifth Annual Reunion and Convention. Members of 780th Squadron, as well as the 465th Bomb Group (H) are invited to attend and are asked to contact: *Charles Davis, 499 Marina Blvd., San Francisco 23, Calif.*

DELAYED DELIVERY: In 1944 while at Nadzab, New Guinea, we assembled a group history, to be published in Australia and delivered in the Philippines. I left before the prints arrived. Can you suggest any way I might retrieve my history of 8th Air Service Group (47th Air Service Sqdn.)? *Thomas P. Ross, 350 Prospect Pl., Brooklyn 17, N. Y.*

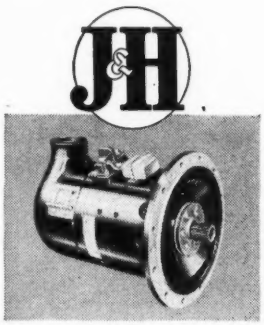
58TH FIGHTER SQDN.: A reunion of former personnel of 58th Fighter Squadron, 33rd Fighter Group, is planned for near future. All men desiring to attend please contact *Myron Halperin, 1442—47th St., Brooklyn 19, N. Y.*

LOOKING FOR SOMEONE? ANY ANNOUNCEMENTS TO MAKE? WRITE RENDEZVOUS AND RENDEZVOUS READERS WILL WRITE YOU.



Want to pack a power plant in a shoe box?

JACK & HEINTZ does it!



J&H GENERATORS supply electricity, the lifeblood of modern planes. Landing gear is raised and lowered, control surfaces are moved, electrically. Electricity provides light and heat. It makes possible the voice and ears of radio, the eyes of radar, and powers the instruments by which today's planes fly. Nearly all types of military and commercial planes depend on J & H generators for their electrical power.

The number of KW's we are asked to squeeze into a generator of shoe box size makes it a virtual power plant, capable of supplying the electrical needs of a dozen families.

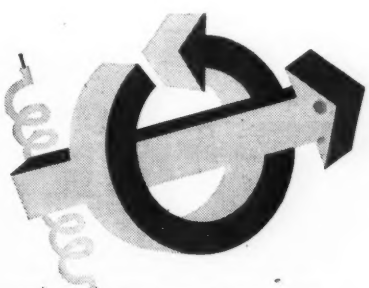
What we hope you will remember about us is this: The key word in the above sentence is *"squeeze"*.

Squeezing the power or performance you need into seemingly impossible weight and space is an idea you'll find expressed in all Jack & Heintz *Rotomotive* equipment. Not just in generators, inverters and other aircraft electrical devices — but in such products as small motors and magnetos, as well.

Right now, it is aircraft requirements that stimulate the calls upon us. But more and more power in smaller and smaller space is a growing need of all industry. When that need begins to needle you, just remember . . . *Jack & Heintz does it!*

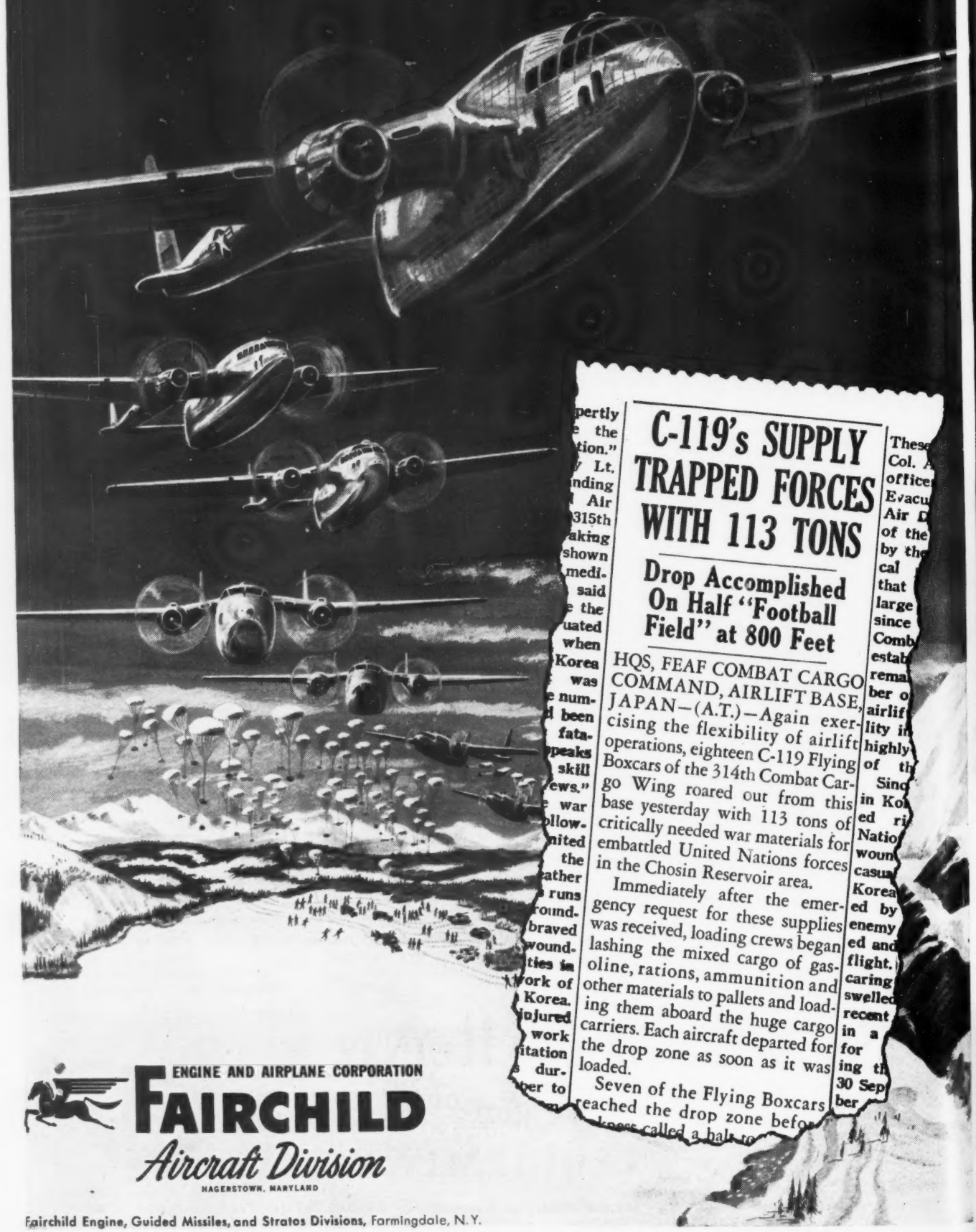
You may find ideas for military use now, or your own product later, in our "Jack & Heintz Does It" book. Address requests, on your company letterhead, to Jack & Heintz . . . Cleveland 1, Ohio.

JACK & HEINTZ *Rotomotive* EQUIPMENT



means electrical, hydraulic or mechanical devices designed to solve unusual problems of developing power, controlling it, or using it

MAKING NEWS... MAKING HISTORY!



C-119's SUPPLY TRAPPED FORCES WITH 113 TONS

Drop Accomplished On Half "Football Field" at 800 Feet

HQS, FEAF COMBAT CARGO COMMAND, AIRLIFT BASE, JAPAN—(A.T.)—Again exercising the flexibility of airlift operations, eighteen C-119 Flying Boxcars of the 314th Combat Cargo Wing roared out from this base yesterday with 113 tons of critically needed war materials for embattled United Nations forces in the Chosin Reservoir area.

Immediately after the emergency request for these supplies was received, loading crews began lashing the mixed cargo of gasoline, rations, ammunition and other materials to pallets and loading them aboard the huge cargo carriers. Each aircraft departed for the drop zone as soon as it was loaded.

Seven of the Flying Boxcars reached the drop zone befo

ENGINE AND AIRPLANE CORPORATION

FAIRCHILD

Aircraft Division

HAGERSTOWN, MARYLAND

Fairchild Engine, Guided Missiles, and Stratos Divisions, Farmingdale, N.Y.

START DIGGING, BROTHER!

Here's a foxhole report on how it feels to be a doughboy on the receiving end of enemy air attack, with a note of concern lest history repeat itself

AIR FORCE
MAY, 1951

By John F. Loosbrock

MANAGING EDITOR, AIR FORCE

IF YOU wonder why this ex-infantryman of comparatively ancient vintage feels called upon to register his views on airpower, you won't wait long for an answer.

First, a doughfoot, by the nature of his trade, has a deep and abiding interest in who controls the air over the given segment of earth that he has been commanded to "seize and hold." Sec-

ond, there are comparatively few, and that includes the thousands of battlescarred veterans of World War II, who have any conception of what it means to eat, to sleep, to dig, to fight, and to die literally under the guns of enemy aircraft.

Comparatively few in the United States Army, that is. The German veteran knows, perhaps better than any soldier in the world—unless it's the Russian. The Japanese know. Or ask the North Korean Reds or the Chinese Communists how it feels to lead the life of a hunted animal, scrabbling for cover from the prying eye of an enemy pilot. Sheer weight of numbers has been their only salvation in Korea. And this answer to airpower is repugnant to a nation such as ours, that is long on its regard for the sanctity of a human life and is short on masses of manpower.

To find American troops in a comparable situation calls for a little digging into the files, back to the early days of the campaign in North Africa, to the debacle at Kasserine Pass and before. There were the landings at Algiers, Oran and Casablanca against the French, the mad rush for Tunis and Bizerte by the British First Army and what American GIs could be snatched from the Algerian beaches and rushed to the Tunisian front. This was the abortive push that bogged down short of its goal and lost an initiative that wasn't regained until spring.

Tunis by Christmas, 1942, was the idea. And it was a good one, on paper. Rommel, the "Desert Fox", would be sealed from his escape ports and pounded to pieces by the pursuing British Eighth Army under Montgomery.

But the German high command, surprised and a bit shaken, didn't sit on its hands. Its reaction was swift and almost decisive.

THE AUTHOR

The author served with the 1st Inf. Div. in North Africa and Sicily, was wounded in action during the period he describes here. He is a former Associate Editor of *Combat Forces Journal*, and for three years before coming to AIR FORCE was the Washington Editor of *Popular Science*

Men, guns and tanks poured into Tunisia from Italian and Sicilian bases. In lightly escorted and unarmed transports the enemy moved as many as 1,000 men a day into ports and airfields that were in range of our own air bases. And all this with impunity from our own aircraft.

And then, with good airfields close behind their lines, they roamed the skies in ME-109 and JU-88s, punishing Allied columns and supply dumps almost at will.

I shuddered when I saw photographs of UN troops in Korea during the disastrous winter retreat, after the Red hordes of China had smashed the "Christmas dinner" offensive. Roads were clogged with tanks and trucks, locked bumper to bumper, crawling out to safety and a chance to reform and fight anew.

This, I thought, is not war as I knew it. Or as these kids and their yet-to-be drafted brothers will know it when the ground rules are shelved for the duration and enemy fighters swarm around you like gnats around a fruit stand.

For I remembered Tunisia, land of paradoxes, test-tube for a young, untried army. A country of choking dust and miring mud, of desert heat and mountain chill, of heavy packs and cold chow, and most of all, the scream of bombs and the overpowering omnipresence of the Luftwaffe.

I remember the Ousseltia Valley. A "stabilized" situation. Stabilized because we were too weak to do any more than dig in nervously on the defensive and wait for the enemy to decide where, and when, and how he would strike. Here the Luftwaffe called the tune and we danced—our eating, our sleeping, our responses to nature all subjugated to the whims of the German pilots.

This is how it was when the German controlled the air. And this is how it will be when the Russian controls the skies of Europe and Asia. As he will. We have lost air mastery for a long time to come, as General Spaatz so cogently pointed out last month.

Let me give you an idea of what it means. You eat two hot meals a day, one in the morning, before the sun rises to betray your chow line to lurking enemy planes, the other after the sun goes down and cloaks the land in wonderful, concealing darkness. Lunch is a nibble on a concentrated chocolate bar of the old D ration while you snuggle up in some secluded cranny.

You don't move around much during the day. Even one lone jeep on a dusty road is fair game for a strafing plane. You sleep in your shelter-half (the GI sleeping bag hasn't been dreamed up) and when you rise in the morning you roll your bedding and slide it under a protective bush, and you don't crawl back in your sack until the sun goes down once more.

You get used to it. They say you can get used to hanging if you hang long enough. You grow bitter and cynical about the absence of your own planes. The Air Force becomes the hated symbol of your own degradation. And you agree with the crusty old colonel who gives the word to air support with the growl, "Why don't they send the bastards back to Hollywood?"

Somehow you grow to take the situation for granted. So much so that when Jerry makes his daily visit with chattering machine guns and barking cannon you work up a grin and say, "Every day the same old faces." Your ack-ack hasn't seen a friendly plane for so long that when they foul up a friendly Spitfire you say, "There goes our air support for the week."

Convoys move by night or, when daytime moves are necessary, with plenty of interval between trucks and with .50-caliber machine guns manned and loaded. Camouflage becomes second nature, as instinctive as pulling on your pants.

You learn to chew tobacco after nightfall to satisfy the craving for nicotine because the glow of a match or a cigarette spells trouble. Or you smoke clandestinely, like a schoolboy, with a blanket pulled over your head.

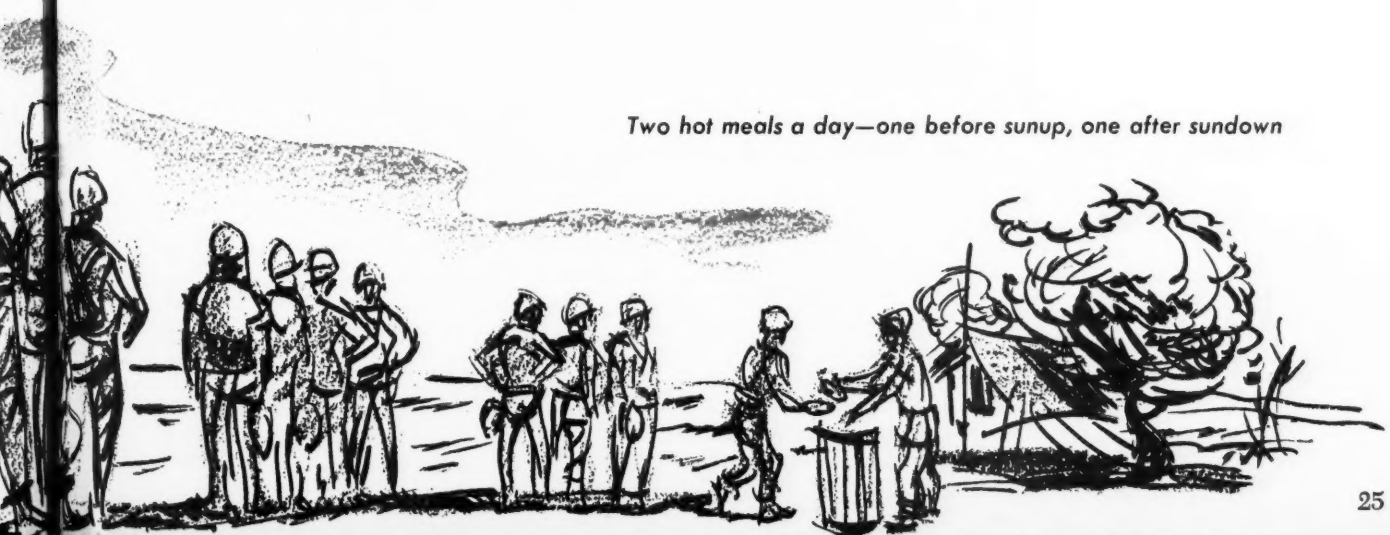
Your stomach tightens and your nerves twang like banjo strings when the circling Stukas go into their shallow, gliding dives. As the bombs scream down you claw the ground and feel it rise to meet you as the TNT churns the dirt.

That was the way you lived all through the lean days, when you learned to know all the bitterness and hopelessness that comes from being on a losing team. After Kasserine, things began to get better. You went on the offensive, you regained your mobility, you began to move around a little more freely, to fight the enemy on your terms instead of his.

In short, you had air cover. The kind you had heard about but never expected to see. Sure, you still got bombed and strafed but not with the old regularity, and, as the campaign ground on to a triumphant halt, with the cocky Afrika Korps pinned into a shrinking beachhead at Tunis, you didn't even look up when planes roared overhead. Or when you did you stood up in your foxhole and cheered, like the time you saw two formations of bombers

(Continued on page 26)

The infantryman has a peculiarly intimate stake in airpower, for it is he who suffers most when it is lacking. Given airpower the ground task is tough enough. Without it, the job is suicidal



Two hot meals a day—one before sunup, one after sundown

Even bedding is hidden during daylight

START DIGGING, BROTHER!

CONTINUED

in the same chunk of sky—one on its way up, the other on its way back for another load.

That was the way it was. Never since then have American soldiers known what it is to fight without a comforting umbrella of wings, and guys, and bombs, and machine guns. In Sicily, up the spiny Italian boot, through Normandy, northern France, and into Germany, up the island chains of the Pacific, airpower manifested itself. Not only in blasting the guns and tanks and fortifications that were blasting you, but by pounding away at supply lines and factories, smashing a tank before it could even be built to smash you. Not even in the darkest days of the Korean campaign has the American doughfoot known the gut-clenching fear of continuous air attack, because there the Red air strength has been content to nibble sulkily at the periphery of the battlefield.

Why am I raking over these dead coals? It is because, in fact, these coals are not dead but glowing brightly in their ashy bed, awaiting only a new war to fan them into flame. We talk much about the lessons we cull from the past. But there are lessons and lessons and the past must be studied in context for it to have any meaning for the future.

And here's where you can run into trouble. No one is more cocky and self-assured than the battle-wise veteran. Especially when he's passing along his hard-won knowledge to those less experienced than himself. But he's inclined to broaden his own personal experiences into hard, fast, and often unwarranted, conclusions.

This is the way we did it. It worked. Therefore this is the way you should do it. That's how the story runs. But the hard core of our Army, and the people who are supposed to wise up the boys now being inducted, are the veterans of World War II and their counterparts of Korea. And sheer attrition would mean that only a handful of these have ever been divebombed or strafed on a continuous basis.

Tunisia was bad enough with ordinary bombs and machine guns and aerial cannon. But when you sit down and think soberly about the technological advances of the past nine years your wig stands on end.

There's no convenient scream to give you prior warning. No lapse of even a few seconds to scrounge a little deeper into your foxhole. The jet is a silent, sneaky thing. You don't hear it till it's dumped its load and gone.

The airborne rocket that cripples your tanks and smashes your artillery is something with which the foot-soldier in Tunisia didn't have to contend, thank God! The devastating napalm bomb, with its ballooning blob of jellied fire, offers another horrible instance in which it is far more blessed to give than to receive.

What's the answer to these new methods of destruction, beyond the doughboy's beloved entrenching shovel?

The answer, of course, is airpower. A control of the sky that restores mobility to an Army dependent upon its ability to move and strike quickly to counter the enemy's superiority in sheer numbers. Airpower properly employed and, above all, enough of it.

We have the know-how for proper employment. And, like most of our doctrine, we got it the hard way. Which brings us right back to Tunisia, where our tactical air policies were forged in the crucible of war.

As an interested party, I have been checking into that forging process, and I have learned that the reverse of the coin is true, that numbers without know-how are worthless. I have learned some of the reasons why I cowered in a foxhole, dug for my life, and cursed the Army Air Forces. And in the learning I got a little hot under the collar.

For the astounding fact is that, during the bitter early days in Tunisia, when we were taking a daily beating on the ground from the German air, we actually had more planes in North Africa than did the Germans.

We had enough of them but we seldom had them where or when they were needed. They were parceled out piecemeal, as though the map lines that allotted responsibility for certain sectors on the ground to individual commanders could somehow be projected upward into the fluid medium of the air.

The sea and air ports through which the enemy moved 150,000 reinforcements, with their equipment, in the opening days of the campaign, lay less than 80 air miles from our own advance airfields. But we did nothing about it. As one observer put it when talking of our hamstrung air, "Who was containing whom?" It was an embarrassing question.

Each ground commander, down to and including corps commanders, had his own little air force under his direct control. And who ever saw a commander, ground, sea or air, who didn't think his own job was just a little more important than the next guy's? So the German air force was able to concentrate its attacks, first on one soft spot, then on another, quickly realizing that we couldn't mass our own planes to meet them.

I can cite chapter and verse.

In one instance, a ground commander demanded a 48-hour continuous air umbrella over his sector before an attack, because 24 Stukas were known to be operating in the area. It was pointed out to him that, on a 48-hour basis, only 12 fighters would be available for patrol at any given time—plus the fact that the planes on air alert would be relatively immobilized, unavailable for bombing and strafing the very airdromes from which the Stukas were operating. Not to mention the job that could be done on enemy reinforcements and supplies moving into

Illustrated by
JOHN DE GRASSE

the area. But he insisted, and he got his air alert. But the attack failed.

Another instance. The British Beaufighter was then a highly secret job, packing a lot of classified airborne interceptor equipment. RAF policy forbade their flying over enemy lines. A corps commander insisted on a mission. Several were shot down. Security was breached, at what cost to the over-all effort no one will ever know.

Case history number three: Included in the pool of Allied planes were some British Bisleys, obsolete bombers that could venture forth safely only at night. But a squadron was ordered out on a daytime bombing mission over the violent objections of the squadron commander. The entire squadron was wiped out.

Another example of the meaninglessness of lines drawn on a map when applied to airpower: An Allied corps was under bitter attack. Only 70 miles away by air, but over tortuous mountain terrain, the aircraft of another corps lay idle in a comparatively quiet sector. An appeal for help was turned down, just in case the planes should be needed where they were. And they were only 70 miles away!

Meanwhile, during the fumbling and stumbling phase in Tunisia, on the Western Desert the Eighth Army and its Desert Air Force were hammering out a new concept of air-ground teamwork, using Rommel's retreating army as an anvil. Someone got the bright idea that the first job of an air force supporting troops on the ground was to knock the other guy out of the sky.

There are two very good reasons which back up this premise. First, control of the air performs the vital function of keeping enemy planes from clobbering your own infantry. Second, it allows you to punish the enemy almost at will. The intermediate, or interdictory, phase is a natural corollary.

More ancient history, you say. Perhaps, but it seems more than coincidental that the tide did not begin to turn in Tunisia until Eisenhower set up a similar arrangement in his command. And the principles evolved were eventually embodied in field manuals that laid the foundation for present doctrine.

Now the situation is reversed. We have our cruelly-won know-how. But the planes to implement it are conspicuous by their absence. We are faced, not only in Europe, but in Korea and other sensitive areas, with a crushing preponderance of air strength that awaits only the Kremlin's nod to send it into action.

What conclusions can we draw from all this? First of all, it would seem obvious that the troops going to Western Europe—and those already there—must face some hard, cold facts.

(1) In case of a shooting war the Russians will command the sky.

(2) What Allied air strength there is initially will be committed to beating off the Red Air Force. Very little, if any, can be committed to the close support of the ground troops.

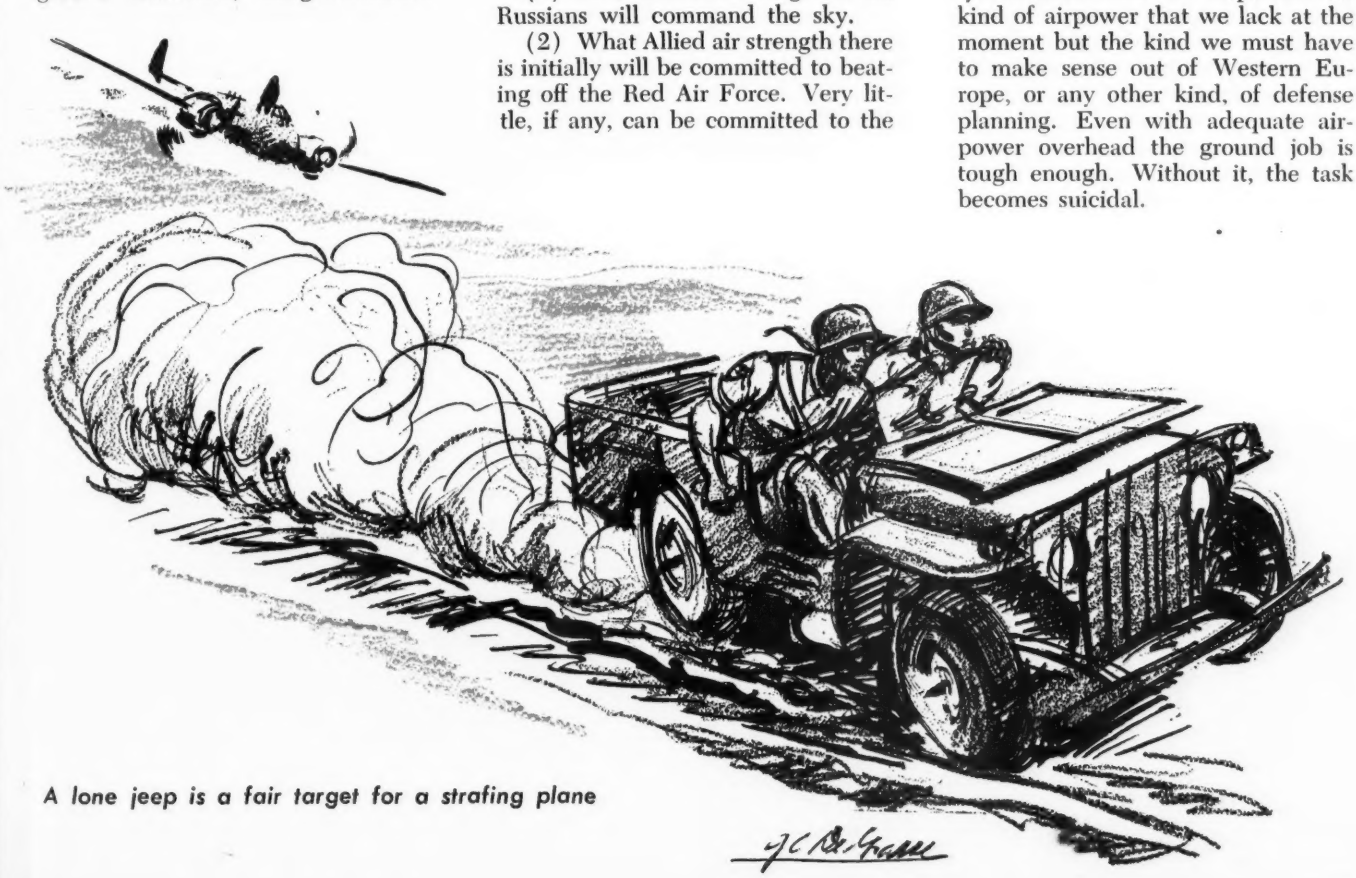
(3) This means our men must know how to fight and survive under the constant pummeling of air attacks. They will have to learn to practice camouflage and convoy discipline to an extent that the American Army has not seen for going on nine years.

Whether or not troops should go to Europe is beside the point. Certainly their presence there is desirable to stiffen the spines of the free nations on which we must depend to halt the sweep of the Russian ground armies. But they have a right to know exactly what they may be up against.

At the risk of sounding stuffy, old-fashioned, and out-of-date I suggest that there is much of value that can be raked from the rocky sands of Tunisia. We are not a nation that accepts defeats, even temporary ones, gracefully. That we do have the resiliency to snap back has been well demonstrated.

But how resilient can you get? We must accept the fact that in a common, garden-variety sort of war a heckling, punishing enemy air force is going to be breathing down the backs of our necks. We cannot count on a lull that will give us a chance to re-form and re-fit. We can hope for the best but we had better be prepared for the worst.

So the infantryman has a peculiarly intimate stake in airpower—the kind of airpower that we lack at the moment but the kind we must have to make sense out of Western Europe, or any other kind, of defense planning. Even with adequate airpower overhead the ground job is tough enough. Without it, the task becomes suicidal.



A lone jeep is a fair target for a strafing plane

Reps. Dorn (center) and Armstrong (right) test their appetites in a GI chow line.

The Great LESSONS of

Two Congressmen tour the battle zone in the Far East for AIR FORCE magazine to search out lessons from the Korean war that could be applied against aggression elsewhere in the world or to war with Russia. This is their exclusive report

EDITOR'S NOTE:

Shortly after the March issue of AIR FORCE appeared with its special report on "The Air-Ground Operation in Korea," the Editor received calls from Congressmen W. J. Bryan Dorn (Dem., S. C.) and O. K. Armstrong (Rep., Mo.).

Independently, each Congressman explained that the March issue of AIR FORCE had, for the first time, cut through the confusion and doubt which prevailed on Capitol Hill regarding the role of airpower in the Korean conflict.

The magazine report had already provoked unprecedented interest (see page 6) but to Congressmen Dorn and Armstrong it called for more than interest. It called for action. First of all, each argued, it was high time that elected representatives of the people go to the Far East and see the facts for themselves, and then report to the American public.

At a bomber base in Japan, the touring Congressmen get the lowdown from a pilot who has done his share of sorties.

The idea appealed to the Editor, who wishes every Congressman could get closer to the facts of combat airpower, and it was consistent with AFA's interest in better government. Further, it suggested an article for AIR FORCE, prepared jointly by these two Congressmen. Let them form a private, bi-partisan committee to search out the lessons of the Korean War which might be applicable to Western Europe and other potential trouble spots, and report the facts as they found them.

The Congressmen, at their first meeting, offered to forsake their Easter recess trips back home, and further, to split with AFA the $1500 per passenger round trip airline fare to Tokyo.

Congressmen Dorn and Armstrong made a good team. They are of different political faiths and from different parts of the country. Dorn is young, aggressive and gregarious, an orator in the pattern of William Jennings Bryan, for whom he was named. Armstrong is older and more reserved, a former university professor, an accomplished author and lecturer and by-lined staff writer for the *Reader's Digest*. Dorn had been a member of an infantry outfit in the National Guard, and in World War II had served 19 months as a corporal with the 9th Air Force in Europe through five major campaigns. Armstrong, an Air Corps captain in World War I, did welfare work in France after that conflict, and had served the American Legion as a member of its foreign relations committee and at the FIDAC congress in Paris in 1937.

The two Congressmen left Washington aboard a Northwest Airlines plane on March 24. Representative Dorn returned April 9 and Representative Armstrong, who also visited Okinawa and Formosa, arrived April 16. Their intensive survey of the Far East had included an hour and a half conference with General MacArthur and an interview with General Ridgway. They had appeared before a committee of the Japanese Diet, visited with American Ambassador John J. Muccio and President Syngman Rhee of the Republic of Korea, and had interviewed scores of officers and GIs of all services from Tokyo to the front lines north of Seoul, including Lt. Gen. Edward M. Almond, commanding the Tenth Corps, US Army; Lt. Gen. George E. Stratemeyer, commanding the Far East Air Forces; Rear Adm. George R. Henderson, commanding Fleet Air Japan; Lt. Gen. Frank W. Milburn, commanding the First Corps, US Army; Maj. Gen. Oliver P. Smith, commanding the First Marine Division, and Lt. Gen. Earle E. Partridge, commanding the Fifth Air Force. Congressman Armstrong also interviewed Generalissimo Chiang Kai-shek and Maj. Gen. Claire Chennault (Ret.) on Formosa.

Arriving in Washington in the wake of General MacArthur's ouster as Supreme Commander, the Congressmen were immediately besieged with requests for public appearances. For several days their comments were news—on front pages, and on radio and television programs, where they expressed their personal views independent of their AIR FORCE assignment.

We are proud to present the joint report of Congressmen Dorn and Armstrong on the lessons of Korea.

...of Korea

By Representative W. J. Bryan Dorn

(Democrat, South Carolina)

and Representative O. K. Armstrong

(Republican, Missouri)

From the moment our airliner touched its wheels to the long runway at Haneda Air Force Base near Tokyo and throughout our tour of the Far East we were both impressed and startled by certain unrealities of the war in Korea.

The war was very real as we stood at the front line north of Seoul and observed the engagement between our doughboys and enemy troops just across the river. The fresh, gaping holes in the B-29 we examined at an emergency landing strip were real enough, and so were the reports of the F-86 pilots we interviewed at Suwon after their return from fighting MIGs over the Yalu River. To the men doing the fighting and dying in Korea, the war is very real indeed.

And yet, our mission for AIR FORCE magazine was to search out the lessons of Korea—lessons which might be applied to periphery wars of the future, or war against Russia.

On this basis alone, *the first great lesson to be learned from Korea is that this is an unreal war.*

In Japan, nerve center of the entire war effort, we were only 350 miles from enemy air bases on the mainland, near enough for our fighter planes, earlier in the war, to conduct combat operations from the islands, as our bombers still do. Despite its vulnerability to air attack, Tokyo reminded us of Washington. Here there was freedom of movement and communications. There were no air alerts or defense drills. Security restrictions were temperate. It was hard to believe we were within fighter range of an active enemy.

In Korea the UN supply convoys moved freely in broad daylight right up to the front, bumper to bumper on the main roads. Here our combat cargo planes shuttled back and forth between rear areas and the front on precise schedules rivaling those of our domestic airlines. At Kangnung airstrip on the east coast we watched the little T-6 Mosquito planes take off and land on their fire direction missions quite oblivious to any possible danger and quite reminiscent of our hometown private pilots on a fair weather weekend at the local airport. We ourselves participated in the unreality of it all as we calmly observed the battle areas north of Seoul from the vantage point of one of the Army's little unarmed L-5s, and again, even more calmly, as passengers in an unarmed C-47 which circled lazily over a battle zone so we could watch our fighters strafe and napalm enemy troop positions directly below. It was as if we were seated in the second deck of a ball park looking down on a play at third base.

These were luxuries that had come with command of the air, and command of the air had come in the early days of the Korean War. Freedom of movement was taken

(Continued on page 30)

Thatch-topped Korean huts burst into a flaming inferno from napalm bombs dropped by Fifth Air Force near Wonsan. A B-29 strike on an explosives factory at Hungnam (below) knocked out this crane without damaging the docks.

The Bogun Chemical Factory, of which this battered power plant (above) was part, employed 7,800 workers before war. A burned-out Red Korean tank offers mute testimony of the kind of close support given ground troops near Waegwan.

A girder topples into the water as B-26s of the 452d Light Bomb Wing blast a railroad bridge at Anbyon, North Korea.

LESSONS

CONTINUED

for granted in Korea. In all-out war with Russia, or even in another perimeter war, this freedom would be lacking because air superiority would be lacking, as General Spaatz has pointed out so forcefully in this magazine (*The Airpower Odds Against the Free World,* April AIR FORCE).

From the standpoint of both air and surface forces, command of the air is the key to full understanding of the war in Korea. Without it the Inchon landing could not have been attempted. Without it our Navy could not operate freely off the shores of the peninsula. Without it our B-29 strategic bombers could not be employed in direct support of the troops. Without it, these troops could not obtain what General MacArthur called "The greatest air support any ground forces have ever received in any war in history." And without this air support, we heard from one ground man after another, the UN forces could not have remained in Korea.

Thus, we early came to the obvious conclusion that the UN effort in Korea was dependent primarily on an unreal situation—unreal, that is, in terms of all-out war because it would not prevail in all-out war. This, we determined, was a lesson the American people must learn to understand in all its ramifications, lest they falsely project the Korean experience to other areas of the world, lest they take air superiority for granted and forget that in any war with Russia air superiority would have to be fought for and won before our surface forces could move effectively and safely.

In our repeated inquiry into the lessons of Korea that might apply to all-out war, we were confronted repeatedly with the lessons that have not and cannot be learned in Korea.

This experience brought to mind the criticism that was heaped on Maj. Gen. Emmett (Rosy) O'Donnell, former chief of the bomber command in the Far East, for his reported statement a few months ago to the effect that Ko-

(*Continued on page 32*)

The "Y" in the tracks made a convenient aiming point for bombardiers who laid their napalm bombs astride two trains.

More than 50 cadets of the South Korean Air Force are receiving instruction from USAF airmen at bases in Korea.

The Far East Air Force's Combat Cargo Command made aviation history when they flew this bridge up to the Han.

rea had provided no real lessons in strategic air warfare. The unfavorable reactions to his remarks seemed, in retrospect, to illustrate the misinformed and misguided thinking which has prevailed in the country regarding the war in Korea and especially its airpower aspects.

For example, the so-called controversy over the jet fighter versus the propeller-driven fighter for ground support operations becomes no controversy at all under the light of full investigation. We spoke with Air Force and Navy pilots who must live or die with the subject, and found the jet fighter the established favorite for all types of tactical combat work. In fact, our ground troops have enjoyed their immunity from enemy air attack to a great degree because of the unique capabilities of our jet planes. As Lt. Gen. George E. Stratemeyer, commanding general of the Far East Air Forces, explained, "Had we been shackled

We must recognize once and for all that airpower has revolutionized our old traditional military and diplomatic concepts and is our defensive keystone

with obsolete, single-purpose, piston-driven airplanes, the air superiority we now enjoy might never have been achieved."

Nor did we find evidence to support the much-publicized "controversy" over the effectiveness of Marine versus Air Force support of our ground troops. If such a controversy did exist in the early stages of the campaign, as reported, it has vanished with time and experience. The military team in Korea is a unified team. At the Joint Operations Centers, heart of the air-ground activity, representatives of all the four services work side by side in harmony. Marine land-based aviation has, since the start of the war, been under the directional control of this Joint Operations Center system, which handles all close support aviation coordination in Korea. From a C-47 over the bomb line near the east coast of the peninsula we watched Air Force T-6 Mosquito planes lead and direct Marine Corsairs to their targets in a mountain valley just below us. Those who continue to stir up this fallacious Marine-Air Force controversy are sabotaging the service unity that is working in Korea.

Looking back, it seems incredible that so many of our citizens were led so far off the track in interpreting the role of airpower in Korea. The misconceptions regarding this effort surely have been instrumental in preventing a realistic approach of our mobilization effort. It was not until publication of the special report, "The Air-Ground Operation in Korea", in the March issue of AIR FORCE magazine that our legislators and the public could properly appraise airpower in this war. The statements attributed to General Rosy O'Donnell, untimely as they may have been, are even more understandable now that we have been to Korea and have witnessed for ourselves the conditions under which our men are fighting in the Far East.

It was General O'Donnell, we believe, who first called public attention to the diplomatic barriers to our military effort in Korea, barriers which illustrate further unrealities in this war. Without consideration of the diplomatic issues involved, it must be reported that the prohibition against our bombing beyond the Yalu River has placed our military leaders in Korea—as it did General O'Donnell—in an impossible tactical position.

On missions against the international bridges that cross the Yalu—their bomb runs by necessity paralleling the river line along the Korean shore—our B-29s are like ducks in a shooting gallery, running along a fixed track with the rifles—the enemy's jets and anti-aircraft guns—trained on them. In full view below are the Red airports from which these jets stage their attacks on the bombers. We watched the B-29s limp home in the soup one evening, and we talked to the crews. We heard them relate with understandable bitterness how they watched the Red jets take off from their Manchurian bases, attack the bombers, and then, after expending their ammunition and fuel, return to base, re-fuel and re-arm, and climb up to repeat their attacks. We heard F-86 pilots who escort the B-29s tell how they must give up the chase against the MIGs when they spot the Yalu River barrier below. From an operational point of view alone, it is both a unique and a disgusting situation.

Our inquiry into the B-29 operation revealed further why the Air Force could hardly be expected to learn lessons about strategic airpower in Korea. At the start of the war there were only 18 targets in North Korea that could be classified as strategic—targets such as the Chinnampo Chemical and Metal Plant, the Chosen Nitrogen Explosives Company at Haeju, the Wonsan Oil Refinery—and all 18 of these targets were neutralized through B-29 attacks by September 15, 1950, less than three months after the beginning of the war. They were neutralized with sporadic attacks sandwiched in while the B-29s were employed predominantly in a tactical role. When General O'Donnell was asked if he had learned anything about strategic bombing in Korea, he could hardly have replied except as he did, in the negative.

On the other hand, the Air Force has learned something about tactical employment of B-29s, primarily because these bombers have never before been in a position to be so employed. The Air Force has learned, for example, that the big bombers can destroy targets no larger than railroad bridges and moving trains. To do this, of course, the bombers must come down to an altitude which makes them, from an operational standpoint, unjustifiably vulnerable to ground attack and fighter opposition. This forbids accurate evaluation of their vulnerability, or lack of it, as strategic bombers.

Another unreal aspect of the war concerns both our air and ground units. The ground troops are by now seasoned fighting men, experienced by the hard knocks of battle, experienced in all phases of ground warfare—except one. They have had no opportunity to gain experience in dealing with hostile airpower. Few of them, from commanders on down, have ever seen unfriendly aircraft overhead in Korea. As a result, camouflage, dispersal, communications security and other anti-airpower measures are lacking, simply because there is no need for them. The same situation prevails with our air units. In addition, the Air Force is able to devote such a large segment of its air capability to ground support operations that it is gaining little or no experience about air defense against modern fighters.

The war in Korea is unreal for another reason. To the average newspaper reader, for example, its progress is measured by the amount of terrain won or lost by the UN forces. The public can hardly be blamed for using this yardstick, inasmuch as it is the official UN yardstick. The stated UN objective in the war is to join North and South Korea by force of arms as a prelude to establishment of a unified Korea. This objective places the emphasis on gaining real estate, whereas, from time immemorial, the mission of every military commander is to destroy the enemy's military machine. This military mission prevails in Korea.

(Continued on page 52)

ALL WEATHER DEFENSE— HOW CLOSE ARE WE?

Not close enough but the F-89 and other fighters coming off the production lines are giving us some of the answers

Northrop's entry in all-weather field is F-89 Scorpion. Unique decelerons are combined ailerons and brakes.

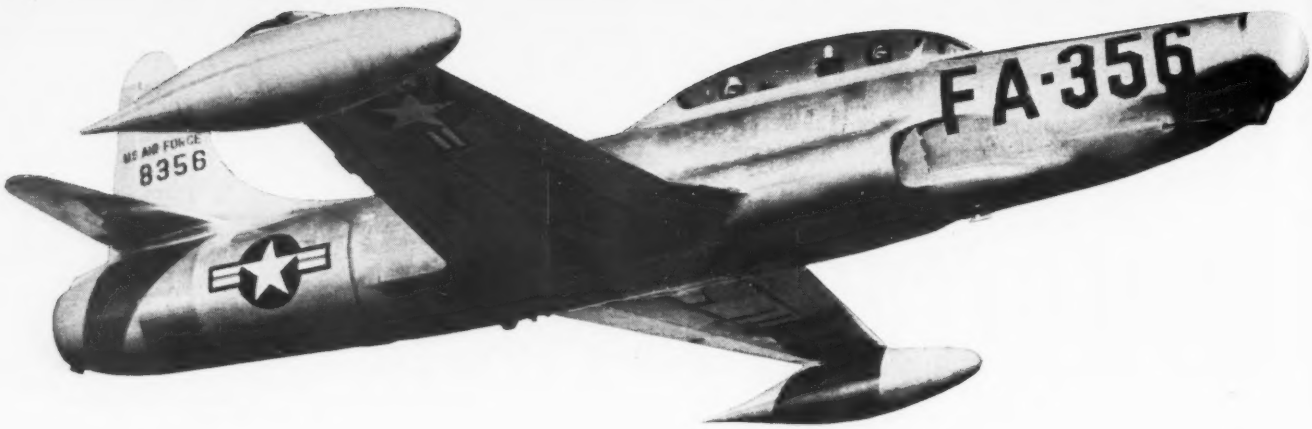
The job of beefing up our air defense is continually frustrated by the unhappy prospect that the best we can do about it is none too good.

With guided missile defense at least a few years away, the best we can expect of our conventional air defense system is that it might prove capable of knocking down 30 percent of an attacking bomber force. We have General Vandenberg's word for that.

By World War II standards this 30 percent figure might be called sensational. Back then an attacking air force could be stopped in rather short order by knocking down as few as five percent of its invading aircraft. The Battle of Britain was won with an eight percent record.

The A-bomb has changed all that. Frustration over modern air defense sets in when we ponder the point that our best effort will permit 70 percent of an invading A-bomb fleet to get through. Even a few A-bombs may be too many.

Our only solace, perhaps, lies in the fact that the enemy is in the same spot, if not a worse one. Hence our dependency on "deterrent strength." Hence the great need for continued development and modern-



Lockheed's F-94B has radar gear and afterburner.

ization of our long range air fleet which, by virtue of its unique retaliatory power, has long since become our first line of air defense.

Meanwhile, we must proceed to develop and modernize our second line air defense and our present conventional system with its radar warning, anti-aircraft weapons and interceptors. While it can give us only 30 percent of the protection we'd like to have, 30 percent is better than nothing and there's always the possibility we can raise that figure *in the defense of specific points* by massing our defensive strength strategically to protect our ability to retaliate against attack. Thus we complete the circle and wrap our air defense problems into a single package.

The priority item in this package is the interceptor. The goal, of course, is the guided missile interceptor, and short of that an automatic interceptor in which the pilot serves merely as the monitor of its electronic equipment. Takeoff and landing will be achieved automatically. At very high speed and very high altitude, it will be capable of locating, tracking and destroying (probably with air-to-air missiles) an enemy bomber solely by electronic means.

As Air Force and industry push ahead toward this goal, intermediate steps in the development begin to emerge in new "all weather" fighters now coming off the production lines. Electronics, of course, is the key to this development. The new planes show substantial improvement in automatic takeoff and landing characteristics, but their airborne radar still demands the services of a radar operator. In these interim interceptors both pilot and radar operator perform mechanically what will be done automatically in future aircraft. In fact, the next logical step in the development calls for the elimination of the radar operator, thus giving the pilot a few more mechanical responsibilities. With this advancement, the plane will be half-piloted, half-automatic. The next step brings the pilot to the position of monitor. After that, the guided missile. Of course, unexpected progress can at any time result in the elimination of several intermediate steps, but the odds are against it,

The Scorpion packs a potent sting. Six 20-mm cannon in F-89's nose dug these deep trenches during firing tests on the California desert near Edwards Air Force Base, Muroc.

for it's a long, hard pull and the problems are many.

The so-called "all weather" fighter (a term no longer used technically) is the forerunner, historically at least, of the automatic interceptor, though the F-61 of World War II and the F-82 now serving as a night fighter in Korea are hardly in the same category, due to their dependence on ground-controlled radar.

A few months ago the Air Force put into operational units its Lockheed F-94 "all weather" fighter, a development from the F-80 day interceptor and its two-seater counterpart, the T-33 trainer. The F-94C, an improved version, is now being flight tested. The F-86D, a modified version of North American's F-86 day fighter, also is being groomed as an "all weather" fighter.

The first plane now flying which was designed from the ground up as an "all weather" fighter is the F-89 Scorpion, now coming off the production lines at Northrop Aircraft in Hawthorne, Calif. Northrop has announced its backlog at the all-time high of $300,000,000, presumably due almost entirely to the Air Force's interest in the Scorpion.

Both the F-89A and the F-94C (not to be confused with the F-94s now with operational units) have radar search and tracking systems which, within their respective speed ranges, can locate all types of targets in all types of weather, and work in conjunction with GCI radar on the ground. The F-89 is powered by two J-35-A-21 Allisons, the F-94C by a J-48 Pratt & Whitney. Both are equipped with after-burners which add some 35 percent power boost to the thrust of each of these aircraft. High rate of climb and high speed are basic requirements for these all-weather interceptors. Also required are radar with fire control computer, improved de-icing systems, auto-pilot coupled with radar, and good firepower, including rockets. Both planes carry substantially the same electronic equipment.

There are two ways to approach the improvement of trans-sonic capabilities in aircraft—either with a relatively thick swept back wing, as illustrated by such fighters as the F-86 and F-91, or with a thin straight wing. Both the F-89A and the F-94C are in the thin wing class; in fact, they have the thinnest wing of any operative Air Force plane.

The trans-sonic F-89, however, represents a notable departure from the F-94 and other Air Force fighters. Its 30,000 pound design gross is about double that of any operative fighter of its type in the Air Force stable.

With a greater weight-carrying capacity than any other interceptor, the F-89 presents interesting possibilities for further development. It doesn't need this capacity for fuel, since range is not a basic requirement for interceptors. In fact, when the F-89 was laid out back in 1946, it was thought of as an "all weather" intruder, which has a definite range requirement. When it was changed over to an "all weather" interceptor, the range was sacrificed for better performance. Listed officially in the "600 mph plus" class, as is the F-94, the F-89 is believed to have a high speed gross potential, built into its airframe, that has not existed in other aircraft of its type. The interesting point in relation to its high weight carrying capacity is that the F-89 offers great possibilities for future armament, and we can assume this means that it has the room to handle improved rocket and cannon developments and, if and when, air-to-air missiles.

With all its beef, the Scorpion is said to handle easily, and Ed Owen, flight test director for Northrop, has dubbed it "A very polite airplane." It is reported to take off and land (without parachute drogues) with ease in less than 2500 feet at Northrop's restricted plane field. In the air, its maneuverability is said to be enhanced greatly by its unique "decelerons" (a combination of ailerons and dive brakes). Unlike conventional flaps or dive brakes, the decelerons can be opened to any angle at full speed, in adjustment with the speed of the airplane, simply by using a control near the throttle. Reportedly, this permits the pilot to slow down suddenly to deal with evasive tactics, lose altitude in a hurry, and go into tight maneuvers without excessive high-speed Gs.

Air Force ground personnel will be indoctrinated in the inner workings of the F-89 with the help of "flying classrooms", made up of component parts of the plane, which will be flown from base to base.

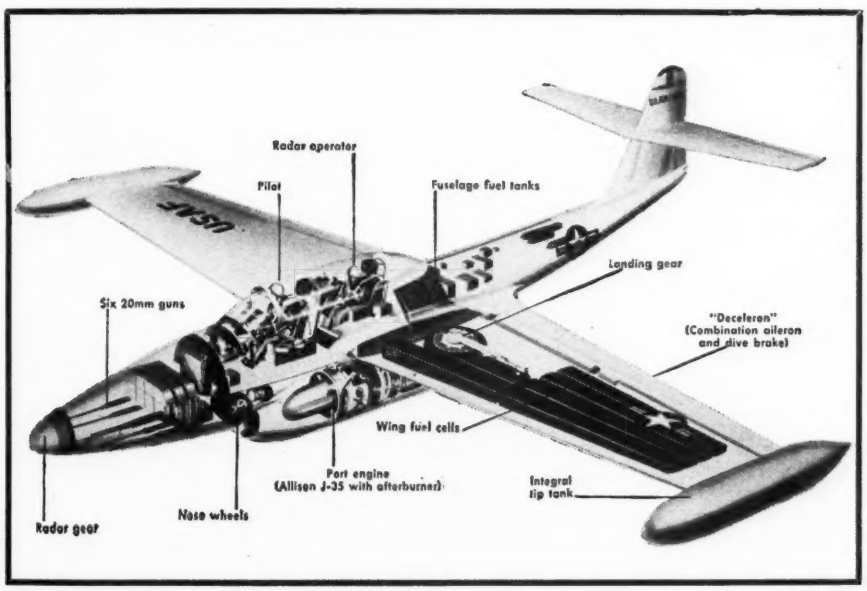
Is the F-89 a forerunner of the automatic interceptor? Probably not. The best guess is that the automatic job will be a delta wing design.

Meanwhile, our air defense people see little hope of losing their headaches.

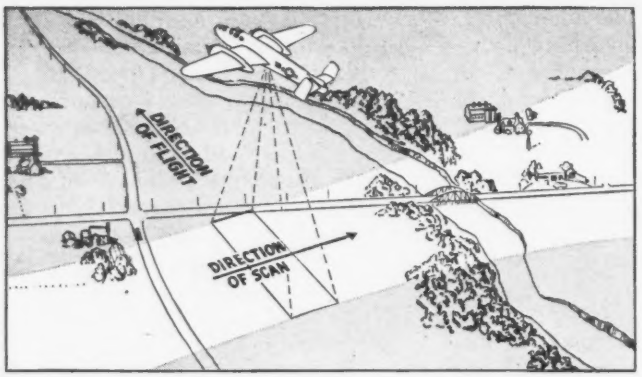
And as if they didn't have enough to worry about, someone is always reminding them that perhaps the enemy doesn't follow our high speed high altitude pattern. Suppose he decides to play his aerial invasion rather slow and low and very maneuverable—which would generally raise hell with our interceptor concept.

The air defense nightmare would be a dream that pictured our interim "all weather" interceptor as a plane which: however fast, proved too slow to get up there in time to achieve an effective intercept; however automatic, allowed for enough human and mechanical error to give the enemy added time and more probable success; however plentiful, was too scarce to protect our vast air defense aproaches; however well supported on the ground, would not get the word until too late; however well conceived, had been built on the wrong concept.

The air defense prayer would be that all this is just a dream.



Two-place F-89, shown in cutaway, carries radar operator as well as pilot. Decelerons allow tight maneuvers to deal with evasive tactics even at high altitudes.

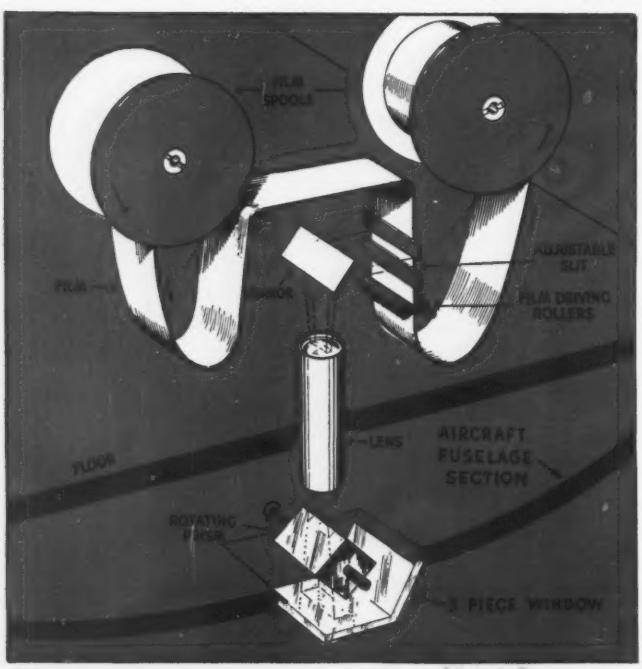


New camera scans strip from horizon to horizon.

New Recon Camera

THE AF's newest photo-reconnaissance camera takes in everything from horizon to horizon in one sweeping look. Key to the new device is a huge, 90-pound prism that hangs beneath the camera lens. This rotates in a semi-circle, picking up sections of the ground and transferring them to a moving roll of film. Ground and film speed are synchronized for a perfect picture. An 18-inch wide film is packed on spools, in lengths of from 200 to 5,000 feet. A computing mechanism determines the speed at which the prism turns and the interval between each scan. Only a two-inch strip of film is exposed at one time, but several feet of film can be moved across the opening in less than two seconds. The camera can take up to ten pictures a minute, depending on altitude. After each sweep of the prism, both prism and film stop automatically so the plane can move ahead over a new area of ground. Camera weighs less than 1,000 pounds, film spools up to 400 pounds. Origfnally designed for the RB-50, the relatively small size and low weight fit it for use in fighter-type aircraft like the RF-86. The Transverse Panoramic Camera can photograph an area 400 miles long and 100 miles wide. At 40,000 feet it could photograph all of Pennsylvania on a single roll of film in less than a day. It was built by the Perkin-Elmer Corp. in cooperation with the Photographic Laboratory, Engineering Division, AMC.

Scanning prism projects below plane's belly in a protective window blister. As film moves across slit, prism rotates to take in 180° sweep. Film is synchronized with ground speed.



TECH TALK

By Helena Redmond

Mid-air refueling can now be done at night or in poor visibility by radar. Tanker and bomber get together with the help of air-to-air homing beacons linked with automatic direction finding equipment.

Latest interphone development is the An/AIC-10, designed by RCA Laboratories, Camden, N.J., for AF planes. AMC electronic engineers on the project credit the new system with a 95 percent reduction of voice distortion, increased fidelity at high altitudes, and ability to cancel out engine and propeller noises.

Six 100-foot parachutes laden with nine tons of cargo set a heavy drop record in recent tests conducted by AMC Equipment Laboratory at Ft. Bragg, N. C. The equipment was bailed out of a Fairchild cargo plane flying at 2,000 feet.

Refill time for heavy drinkers like the B-36 and B-50 will be cut from hours to minutes by the AF's Type F-6 fuel-servicing semi-trailer. With a delivery rate of 600 gallons a minute, the new trailer can gas up a B-50 in 35 minutes. Old-style equipment takes seven hours.

Aero Medical Laboratory tests near Ladd Field, Alaska, are poking into the problem of just what kind of survival food downed airmen will need to get them back to civilization.

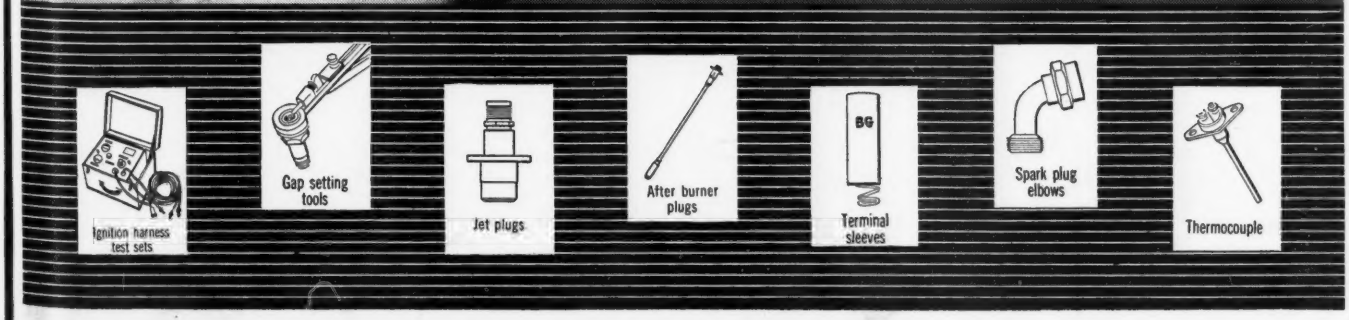
Aero Medical Laboratory of AMC and Bar-B-Buns, Inc., of Cincinnati, have come up with a machine which will let flight crews eat hot, toasted sandwiches at the rate of one a minute.

Fairchild's newest aerial mapping camera is being tested at AMC's Engineering Division Photographic Laboratory. The 85-pound aerial eye can map 7,000 square miles of the earth's surface and automatically records time and altitude on each negative of its 400 feet of film.

AMC has just announced the development of a new type diesel engine which runs equally well on diesel oil, jet fuel, kerosene, or 100 octane aviation gasoline.

A new electrical "co-pilot" will guide an all-weather jet fighter through combat maneuvers with split-second accuracy. The Westinghouse Electric Corp. teamed up with the Air Materiel Command's Armament Laboratory, Control Equipment Branch, to develop the auto-pilot. The midget device will be installed in the Lockheed F-94C being built for the Air Force. The jet plane version of the auto-pilot is exceptionally light. It weighs less than one-third as much as conventional automatic pilots. It is a "first cousin" of the gun-stabilizer developed by Westinghouse during World War II for tanks.

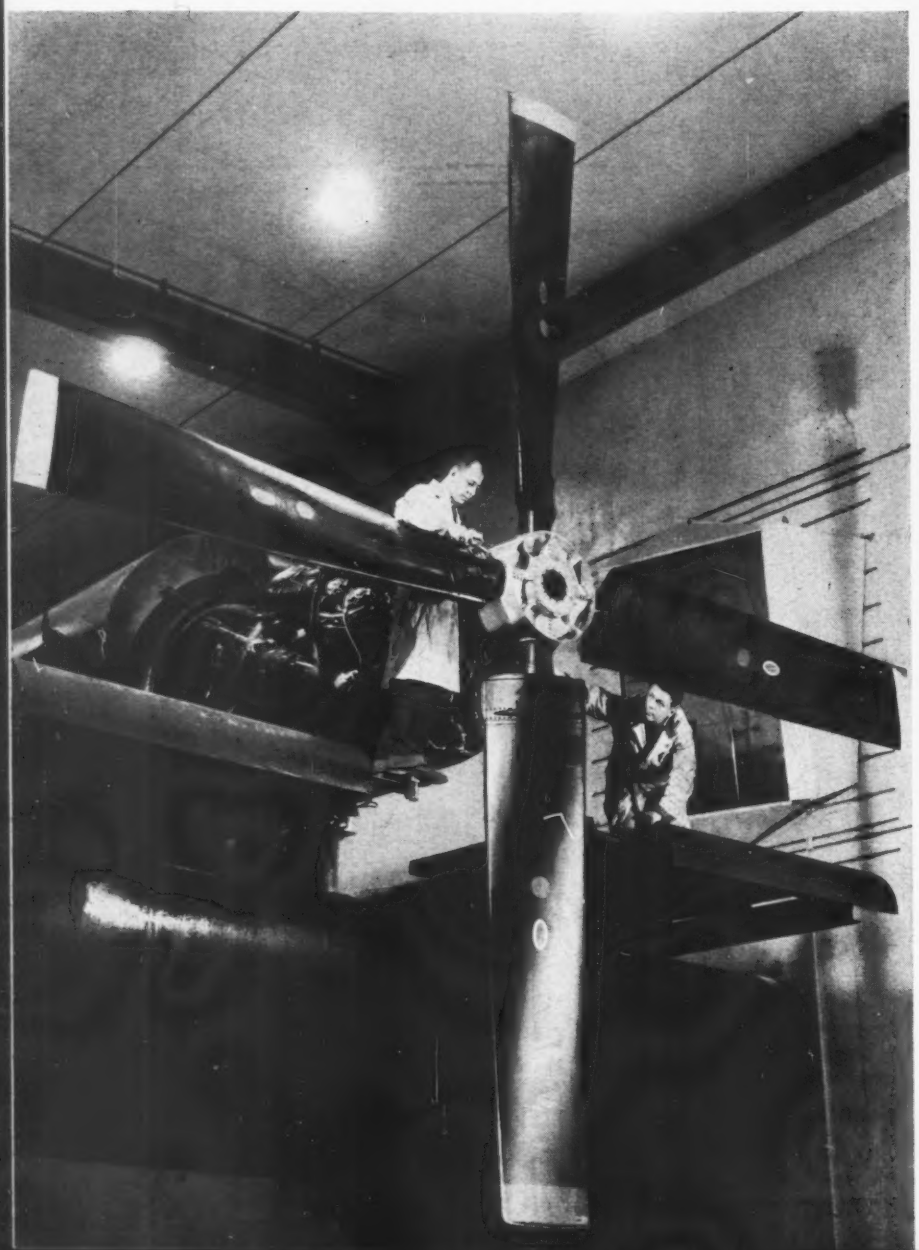
For Longer Service Life In The Heart Of The Jet . . .
BG
the new BG
SURFACE GAP
JET SPARK PLUG
The unique design of the new BG surface gap jet spark plug has resulted in phenomenal service life in combat tested and proven jet aircraft.
This is another step forward in BG's constant research, development and manufacture of superior gas turbine components.
MODEL A-8076
For information on BG products, write:
THE BG CORPORATION
136 WEST 52nd
NEW YORK 19


Ignition harness test sets
Gap setting tools
Jet plugs
After burner plugs
BG
Terminal sleeves
Spark plug elbows
Thermocouple

TECHNIQUE

19-Foot Propeller Designed for Turbines

Workmen in the photo below are dwarfed by the 19-foot propeller, largest ever built by the Hamilton Standard Division of United Aircraft Corp. The giant prop was developed under AF sponsorship for power plants delivering more than 5,000 horsepower. One of a Hamilton line of turbine propellers called "Turbo-Hydromatics", the new propeller is capable of handling the most powerful piston engines now being considered, as well as the so-called "medium" horsepower turbines. Two of them can also be mated to form an eight-blade dual-rotation model that can handle even greater engine power. The Turbo-Hydromatic uses an electronic control to regulate the hydraulic pitch-changing mechanism which adjusts blade angle to deliver more or less thrust in flight. On the ground the pilot takes over pitch control, so that he can vary taxiing speed by changing amount and direction of propeller thrust. Two comparatively tiny 5-pound pumps are used simultaneously for rapid changes in pitch. Under normal conditions only one pump is used. The pumps need a total of fifteen horsepower from the engine shaft to drive them. Each delivers thirty quarts of oil a minute from the propeller's own reservoir.



Side-Saddle Safety Harne

Designed especially to protect sidewise-sitting air troopers, this new safety harness has been develope the Air Materiel Command. The harness, made from angle of nylon mesh webbing, fits snugly over the s and his 150-pound pack. It will withstand a crash of about 8,000 pounds, or 32 G's. Slated to become ard equipment on AF cargo planes, transports and gliders, the new harness will replace the present quate lap-belts. It fits neatly into the 20-inch wide allotted each man and weighs only three and on pounds, one more than its predecessor. A strap crosses the side of the man's neck to protect his from a jarring crash has been padded to double pillow. The harness was developed by AMC's Aero ical Laboratory and was tested on the AF's human erator—a device to measure decelerative forces human body—at Edwards AF Base, Muroc, Califor

Shaking Out Bugs

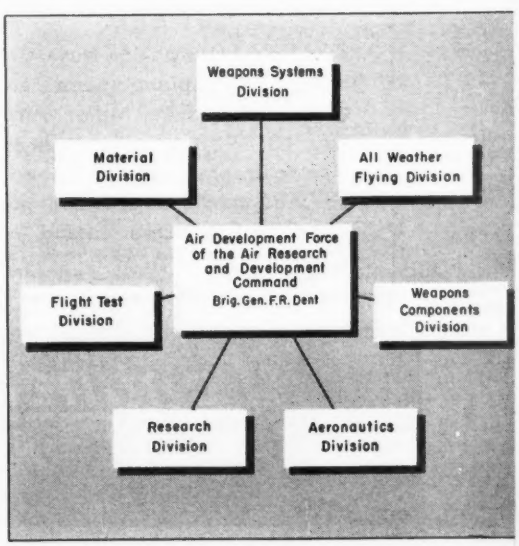
Airborne fire extinguishing equipment gets a going over on this vibration testing machine at the Walter Kidde & Co. plant, Belleville, N.J. Here a sphere of CB, a fire extinguishing agent, is mounted on the tester in a position similar to that likely to be encountered in service. Vibration is applied slowly through a wide range of frequencies and forces. The test engineer adjusts his stroboscope so that its light beam is pulsating in time with the vibrations of the sphere. The sphere is then isolated at one point in its vibration cycle and appears to be standing still. Then the operator can see any distortions or failures. Data helps engineers to improve equipment design. The tester can also be used for fatigue tests, noise location, shake tests, and calibration. Such tests reduce operational failures.

Expendable Chute

This square cargo chute made from strips of cotton muslin can deliver 500 pounds of cargo from a plane traveling 175 miles per hour. It will replace the old 24-foot rayon cargo chute that had a capacity of only 300 pounds. Used in clusters of three or four, the new chute is expected to do the job of a 64-foot nylon chute currently used for heavy drops. Secret of the cotton chute's strength lies in its simple design. The G-13 is made of nine strips of material joined with cotton tapes to form a 28-foot square. Uprushing air escapes through spaces between the strips, cutting down opening shock and allowing a greater load. It costs half as much as the rayon cargo chute. The new chute is deployed direct from its shipping container, an ordinary cardboard box, instead of from a conventional canvas pack. The lid of the box serves as a pilot chute. The same design in fiberglas is being tested.

ARDC Takes Over

At midnight April 1 the newly organized Air Research and Development Command (ARDC) took control of all Wright-Patterson AFB activities that were formerly under the aegis of Air Materiel Command's Directorate of Research and Development. ARDC's portion of the Dayton installation will be known as Air Development Force, headed by Brig. Gen. Fred R. Dent, Jr. It will handle, from drawing board to service test model, all items designed and developed for AF use. A number of other AF activities will also come under the new command but precisely which is not known at this time. The chart at right indicates former AMC activities under ARDC control.



bre Gets New Punch

r and more powerful than the F-86A, h American's F-86D has successfully com- d firing tests. Twenty-four 2.75-inch Mighty e rockets give the new Sabre enough fire- r to knock out any size missile or aircraft n to be flying today. The Mighty Mice can ired singly or in various combinations ted by the pilot. Folding tail vanes extend abilize the rockets in flight. The plane is ered by a GE J-47 engine with afterburner.

tting Out Fast

ng out and down has been made easier for jet pilot with this new quick disconnect ably. All the attachments needed for high- de flight, such as oxygen supply, G-suit , and radio headset wires are combined in -inch rubber cable which cuts loose when ejection seat is triggered by the pilot.

Only CONTINENTAL BACKS YOU WITH Established

CONTINENTAL MODEL E185
471 Cu. In. Displacement
185 h.p. at 2300 r.p.m.

RECORDS ARE ROUTINE WITH CONTINENTAL POWER

DISTANCE

Capt. William C. Odom set new over-water record for light planes, flying from Honolulu to the Mainland in January, 1949. In March, Capt. Odom broke his own record, flying same Beechcraft Bonanza from Honolulu to Teterboro, N. J., 5,004 miles.

☆

ENDURANCE

Woody Jongeward and Bob Woodhouse landed their Aeronca Sedan at Yuma, Ariz., Oct. 10, 1949, after remaining aloft 1124 hours—or six weeks and five days.

☆

ALTITUDE

Sra. Ana Luisa Branger set officially-certified international altitude record of 24,504 feet in her Piper Special with Continental C90-8F engine on March 31, 1950, at Congressional Airport, Rockville, Md.

☆

SPEED

John Paul Jones of Van Nuys, Calif., broke midget plane speed record at Detroit-Wayne Major Airport Aug. 13, 1950, winning Continental Motors Trophy Race at speed of 187.785 m.p.h., in home-built plane with C85 Continental engine.

The fact that Continental aircraft engines hold all major performance records doubtless has much to do with the preference they enjoy. But at least equally important from the standpoint of owner and pilot is Continental Motors' unreserved acceptance of the obligations which that preference has imposed. This attitude is reflected in Continental Motors' maintenance of parts and service facilities wherever people fly. You may not have occasion to use them this trip, or next—but it's reassuring to know they're always there ahead of you, waiting to speed you on the way.

CONTINENTAL MOTORS · Powerful as the Nation · AMERICA'S STANDARD

Continental Motors Corporation

Aircraft Engine Division
MUSKEGON, MICHIGAN

CONTINENTAL POWERS MORE LIGHT PLANES THAN ALL OTHER ENGINES COMBINED

USAF to Release Inactive Reserve Airmen

No further recalls of inactive airmen are planned. VAR officers with certain critical skills continue to face involuntary EAD

USAF, as well as Navy, will begin releasing inactive enlisted reserves in July 1951. These men will be returning to civilian life in substantial numbers by October, according to Assistant Secretary of Defense Anna Rosenberg. Mrs. Rosenberg also told a House Armed Services subcommittee that the Army would begin in September to release its inactive enlisted reserves and that all of them would be in civilian clothes by the end of this year. Marine Corps reservists will begin releasing its inactive reservists in June and plans that by July, 1952, all who are serving involuntarily will have been released.

These plans hinge, of course, on the hope of no further deterioration of the international situation.

The USAF is no longer calling inactive enlisted reservists to duty involuntarily. And unless manpower requirements change significantly, no further recalls are planned. Inactive officer reserves will be involuntarily recalled only if they possess special required skills not available in the pool of the Organized Reserve.

This policy, however, does not affect inactive reservists whose orders have already been issued. Organized Air Reservists with delays of less than 90 days who were transferred to Volunteer Air Reserve status will be recalled at the end of delay.

The Organized Air Force Reserve, numbering approximately 55,000, and the Air National Guard, numbering about 45,000 at the beginning of the Korean campaign, have been called or will be called to duty, with few exceptions, by July 1, 1951. Exceptions include: (1) those found unqualified for physical or other reasons and dropped from active Reserve assignments, and (2) a few Reserve personnel earmarked as needed but not needed immediately. The latter will form the nucleus for the actively participating Reserve organization that will continue.

All AFRTC wings and all but five ANG wings will be on active duty by July 1, 1951. And an undisclosed number of smaller units from both components have been called. Latest plans for ANG include ten tow-target units which will be ordered into service between May 15 and July 1.

Each of ConAc's four numbered Air Forces now has at its headquarters a Committee on Air National Guard Policy and one on Reserve Policy, similar in mission to those at Hq, USAF. Each is required to: (1) Solicit comments, suggestions, and recommendations concerning the organization, administration, and training of ANG and AFR. (2) Study and evaluate material received. (3) Forward screened comments to Hq, USAF staff committees. (4) Submit other comments through channels. (4) Advise numbered Air Forces' commanders on USAFR matters.

Maj. Gen. Earl S. Hoag, Special Assistant to Chief of Staff for Reserve Forces, is president of the new USAF Reserve Planning Board, composed of six general officers.

USAF Reserve officers now serving in a grade lower than their Reserve rank will get an opportunity to continue on extended active duty on a volunteer basis in the current USAF grade upon expiration of current service statements. Written requests for relief from EAD are authorized for those in this category who do not wish to continue in a volunteer status. Officers thus relieved may then request recall in their Reserve grade like other inactive Reservists. Such officers will not receive preferential consideration for recall.

Recall to active duty does not affect a student's standing in the Extension Course Program, according to Col. Stoyte O. Ross, Commandant, Extension Course Institute. Any member of the USAF, active or Reserve, who is eligible, may enroll.

ConAc has been authorized to appoint 50 SAC airmen flight engineers (B-36 type) as EAD Reserve officers for duty as flight engineers, a critical category. AF Manual 36-5 make no specific provisions for such appointments, but the directive is considered to cover them, based upon the SAC commander's recommendation of officer rank for a B-36 flight engineer. Thirteen additional specialties will be opened for direct commission in AFUS and USAFR by an amendment to Manual 36-5.

Department of Defense's new "qualitative distribution of manpower" plan, which aims to give each service an equal proportion of men in various intelligence brackets, will not affect procurement of aviation cadets, ex-servicemen, and members of the Air Reserve.

Long-Range Plan for Reserve Forces Announced

The first word concerning long-range plans for an adequate, readily available reserve force came as Assistant Secretary of Defense Anna Rosenberg laid before a House Armed Services subcommittee a reserve and National Guard blueprint based on compulsory training and service.

The Civilian Components Policy Board after consulting AFA and other organizations, as well as the three military departments, recommended certain reserve policies to the Secretary of Defense. These, with changes, are now before the subcommittee.

The program, designed to provide a flow of trained men into the reserves and to set up an equitable distribution of active duty time, will set up (1) a Ready Reserve; (2) a Standby Reserve; and (3) a Retired Air Force Reserve.

The Ready Reserve will consist of units and individuals available for immediate duty when an emergency arises, to assist in the expansion of the armed forces. It would be our first line of reserve strength. Military skills would be kept fresh by regular drills and training, supplemented by 15 days of active duty. Ordinarily, men completing the basic military training or service in the armed forces would be expected to serve three years in the Ready Reserve.

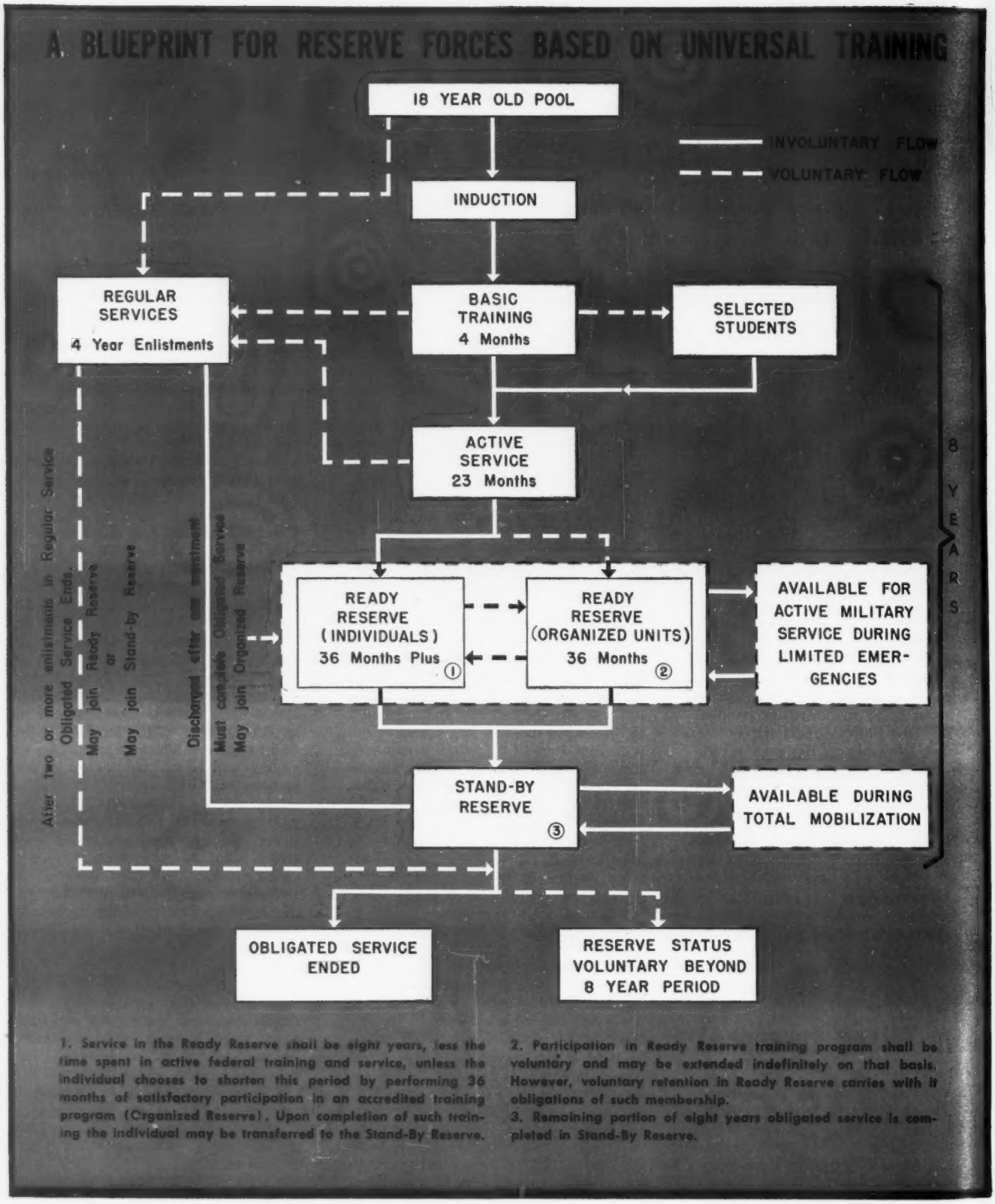
Men not desiring to maintain their status in the Ready Reserve would move into the Standby Reserve. This would consist of units or individuals available for involuntary call to duty only after a declaration of war or a national emergency declared by the Congress. Within the Standby Reserve would be an Inactive Status list. They would be called only when qualified men possessing needed military skills were not available in other sections of the reserve.

The Retired Reserve would be made up of men who have fulfilled all their legal obligation for reserve duty and request continued assignment on an inactive status basis. It would also include officers and EM on the Reserve Retired list. Its members, if qualified, would be called to duty involuntarily only in time of war or national emergency.

Mrs. Rosenberg said the Department of Defense is planning to strengthen promotion and retirement policies for the reserve. The Pentagon is also making plans for better reservist training.

Subcommittee Chairman Overton Brooks (D., La.) termed the new blueprint "the Magna Carta of the reserves." Full realization of the plan, of course, depends on passage of Universal Military Service and Training legislation. However, many provisions of the proposed program could be put into effect immediately. Others will require passage of an "Armed Forces Reserve Act." This would provide the basis for the organizational structure, training, logistical

(Continued on page 42)


A BLUEPRINT FOR RESERVE FORCES BASED ON UNIVERSAL TRAINING
18 YEAR OLD POOL
INVOLUNTARY FLOW
VOLUNTARY FLOW
INDUCTION
REGULAR SERVICES
4 Year Enlistments
BASIC TRAINING
4 Months
SELECTED STUDENTS
ACTIVE SERVICE
23 Months
8 YEARS
After two or more enlistments in Regular Service
Obligated Service Ends.
May join Ready Reserve
or
May join Stand-by Reserve
Discharged after one enlistment
Must complete Obligated Service
May join Organized Reserve
READY RESERVE (INDIVIDUALS)
36 Months Plus ①
READY RESERVE (ORGANIZED UNITS)
36 Months ②
AVAILABLE FOR ACTIVE MILITARY SERVICE DURING LIMITED EMERGENCIES
STAND-BY RESERVE ③
AVAILABLE DURING TOTAL MOBILIZATION
OBLIGATED SERVICE ENDED
RESERVE STATUS VOLUNTARY BEYOND 8 YEAR PERIOD
1. Service in the Ready Reserve shall be eight years, less the time spent in active federal training and service, unless the individual chooses to shorten this period by performing 36 months of satisfactory participation in an accredited training program (Organized Reserve). Upon completion of such training the individual may be transferred to the Stand-By Reserve.
2. Participation in Ready Reserve training program shall be voluntary and may be extended indefinitely on that basis. However, voluntary retention in Ready Reserve carries with it obligations of such membership.
3. Remaining portion of eight years obligated service is completed in Stand-By Reserve.

MOBILIZATION CONTINUED

support, and administration of the reserve forces. Such an integrated program has been lacking in the past and has been one of the soft spots in our whole reserve setup.

The services will soon reclassify present reservists into the three new categories. Officials have hinted that the same general rules would be used to transfer present reservists to the Stand-by Reserve as those the plan proposes for new reservists.

Representatives of the three services will testify within the next few weeks to explain the plans they have made to carry out the over-all policy and define the role that present reservists will play in the proposed setup.

The proposed agenda for the subcommittee includes size of the reserve components, in peace and war; procurement, pay, and active duty time; mission and organization of the reserve forces; and training policies.

Association members are urged to forward their views and recommendations on the new program to Washington Hqs. so that AFA spokesmen who testify before the subcommittee during the coming weeks will reflect membership views.

(Continued on page 61)

Photo courtesy of *The Aeroplane*, London

Trans-Atlantic Teamwork

... The twin-jet Canberra, being groomed to bolster our tactical air power, is a working example of British-American cooperation. Originally designed in England as a high-altitude radar bomber, its flight tests proved it to be as effective at low-level operations. Now, a night intruder version of this light jet bomber will be added to our own Air Force, built by Martin under license from English Electric Co., Ltd.

The Korean conflict has re-emphasized the importance of tactical air power in low-level support of ground troops. To this mission, the Canberra brings exceptional maneuverability at high combat speeds, and at low levels and low speeds . . . ability to whip around like a fighter and turn with the best of modern aircraft . . . ability to carry a potent, destructive wallop!

Martin
AIRCRAFT

Builders of Dependable Aircraft Since 1909

THE GLENN L. MARTIN COMPANY, Baltimore 3, Md.

"HOT FOOT" for the B-36

In Arctic regions where temperatures often hit 65 degrees below zero, airplanes "freeze up" when engines stop turning over.

To heat up engines and cabins, de-ice wings, control surfaces, landing gear and to free hydraulic lines, AiResearch engineers have designed and built a portable gas turbine powered ground heater—*another AiResearch first.*

The result of a rush development-production order placed by the Air Force several months ago, the new heater will produce clean 280° air from six different outlets on a −65° day, or 4,000,000 BTU per hour. This is more heat than could be produced from 100 large floor furnaces. It is designed to warm up a multi-engine B-36 bomber within 15 minutes in sub zero Arctic weather. It will be used to heat living quarters and all types of mechanical ground equipment.

The compact, lightweight AiResearch gas turbine which powers the ground heater is completely self-contained. Developed as a source of pneumatic power for aircraft, its use in the ground heater is an example of its versatility. It is also being used to start jet and turboprop engines, for operating aircraft accessories and for ground air conditioning. It is ideally suited for any condition where self-contained portable power can be used to advantage.

AiResearch
DIVISION OF
THE GARRETT CORPORATION

• ***AiResearch — Specialists in the design and manufacture of equipment involving the use of high-speed wheels — is a leader in the following major categories:***

Air Turbine Refrigeration • Cabin Superchargers • Gas Turbines • Pneumatic Power Units • Electronic Temperature Controls
Heat Transfer Equipment • Electric Actuators • Cabin Pressure Controls

AiResearch Manufacturing Company, Dept. L-5, Los Angeles 45, California

AFA Sponsors Pentagon ROTC Conference

Joint operation by AF Headquarters, Arnold Air Society, and AFA results in two-day discussion of AF ROTC program and problems

Eight specially selected Reserve Officers Training Corps Cadets from colleges throughout the nation were called to Washington recently by the Secretary of the Air Force for the first national conference on the Air ROTC program, sponsored by the Air Force Association.

The eight Cadets, elected by members of the Arnold Air Society, the Air ROTC national fraternity, represented cadets at seventy-six colleges and universities, and came from the University of Cincinnati, New York University, University of Florida, Ohio University, Texas Technological College, Loyola University of Los Angeles, and the College of St. Thomas at St. Paul, Minnesota.

The conference was opened by General Nathan F. Twining, Air Force Vice Chief of Staff, who welcomed the Cadets with the admonition to "take your shirts off" in presenting comments on and opinions of the Air ROTC program. General Twining solicited the Cadets' recommendations as to how the program could be improved so as to assure the Air Force a steady flow of highly qualified reserve officers annually.

Maj. Gen. Earl S. Hoag, Special Assistant to the Chief of Staff for Reserve Forces, spoke to the Cadets on the history and purpose of the Reserve Officers Training Corps and emphasized its extreme importance to the US Air Force in providing future leaders. General Hoag also was host at a special luncheon given in honor of the Cadets at the attractive and well-known Army-Navy Country Club near Washington.

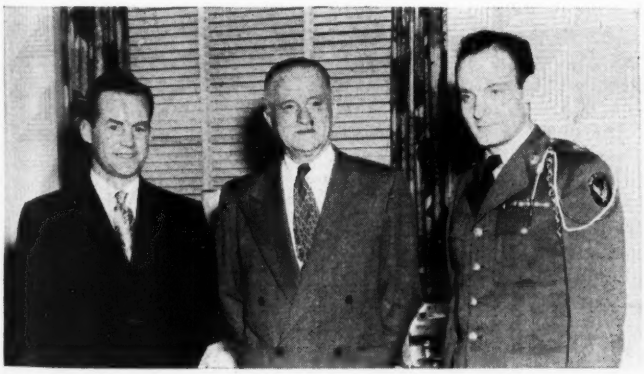
The many opportunities to serve the Air Force and nation were pointed out to the Cadets by AFA president Bob Johnson. He stated that the Cadets could be helpful to the ROTC program, especially through the Arnold Air Society, by briefing new college students on the program and by appearing before local high school groups and discussing the many advantages and opportunities in taking ROTC training while attending college.

In describing the Arnold Air Society to the Air Force officials at the conference, Raymond Goelz, the National Commander and a Cadet at the University of Cincinnati, stated that their principal aim is to develop within their members those attributes which will best serve the individual when he enters the military service. The Society, open to Advanced AF ROTC Cadets, was organized four years ago with the formation of one squadron at the University of Cincinnati. There are now squadrons at 76 of the 125 institutions offering AF ROTC training.

Lt. Gen. H. R. Harmon, Special Assistant to the Chief of Staff for the Air Force Academy, described in detail the need for an academy for the US Air Force, such as both the Army and Navy now have. General Harmon made it clear that the Air Academy would not replace the present ROTC training program at our collegiate institutions—that there was a definite and vital need for both training programs.

The morning session of the conference was highlighted by a special 45-minute briefing on the war in Korea; from the outbreak of hostilities on June 25 of last year until the present date.

(Continued on page 46)



AFA and Arnold Air Society bosses talk shop at reception. Left to right: AFA president Bob Johnson; Carl A. Spaatz, AFA board chairman; and Raymond Goelz, president of AAS.

Key conference participants were: left to right: Cadets Savage, King, Dozier, May, Goelz, Sanchez, Captain A. T. Reid, Cadets Divita and Armstrong, and Mr. R. M. Thurston.

Above photo depicts opening scene of AFA-sponsored ROTC conference. Top brass was on hand to welcome AAS Cadets. L to R: Maj. Gen. Earl S. Hoag; Gen. Nathan F. Twining; Lt. Col. M. H. Strickler; R. M. Thurston; Robert Johnson.

Colonel E. L. Sykes, chief of the Korean Evaluation Unit and Special Military Assistant to Secretary of the Air Force Finletter, conducted the briefing.

The afternoon session was opened by R. M. Thurston, Chief of the ROTC Section of AF Headquarters, reviewing the entire ROTC program, including plans, programming, regulations, problems and the Reserve Officers Training Act of 1951, which is to go before the House and Senate in the near future. Thurston announced that the Air Force will add 62 new institutions to those already offering Air Force ROTC training —bringing the total to 187 by the opening of the 1951 fall school term. In meeting this greatly increased quota of ROTC students, Thurston stated that under no circumstances would the quality of the training be sacrificed in order to obtain the quantity of Cadets needed to meet the quota.

Taking General Twining at his word, the Cadets "took their shirts off" for several hours in making known their opinions of the AF ROTC program. In calling attention to those things which they felt were hindering the program, the Cadets recommended that:

▶ The ROTC program be confined to training the Cadet in such basic subjects as leadership, administration, composition and mission of the US Air Force, rather than for duties in any specialized field—and that provisions be made for Cadets to attend service schools after graduation and commissioning for their specialized training.

▶ Immediate action be taken to revise and improve the contents of all Air Force ROTC textbooks, and that increased effort be placed on devising and making available to ROTC units appropriate training aids.

▶ ROTC Cadets be given more responsibilities in working out training schedules and programs and in conducting this training, so as to develop better leadership.

▶ Impress upon the institutions offering ROTC training the importance of adequate and appropriate housing and facilities for their ROTC units.

▶ Air Force Headquarters prepare and disseminate an official TO & E which establishes the appropriate number and types of ranks among the Cadets of an Air Force ROTC unit, in proportion to the number of Cadets enrolled in the Unit. These ranks should be standard among all units.

▶ Air Force Headquarters impress upon all PAS&T's and instructors the importance to the Air Force and the ROTC program of ROTC campus organizations, especially the Arnold Air Society; and that a National Advisor to the Arnold Air Society be stationed at Air Force Headquarters, and an Executive Officer, stationed at the national headquarters of the Cadet organization, whose duties shall be those of coordinating and assisting with the activities of the AAS.

▶ Every precaution possible be taken to obtain and assign the most qualified instructor personnel available and that the highest standards be established as qualifications for instructor assignments.

▶ Summer camp training be toughened up so as to instill more discipline and responsibility in the Cadets; that stiffer discipline be practiced in the classrooms and on the campus during ROTC activities.

▶ Senior Cadets be allowed to assist the PAS&T in making his selection of Basic Cadets who will be permitted to take the Advanced training.

The Cadets voted to dispense with the showing of Korean combat films, as had been scheduled for the conference, in order to discuss further the ROTC program.

General Carl A. Spaatz, first Chief of Staff of the Air Force and now Chairman of the Board of Directors of the Air Force Association, was on hand to visit with the Cadets at a reception and dinner at the Hotel Statler staged in honor of the Arnold Air Society by AFA. Spaatz commended the Cadets for their interest in ROTC training and their coming to Washington to discuss it with top Air Force officials.

The Professors of Air Science and Tactics of the University of Maryland, Col. John C. Pitchford; Georgetown, Maj. David B. Moody; and Howard University of Washington, D. C., Maj. Lewis C. Smith, attended the conference and discussed the ROTC program from the instructor's point of view. Capt. Addison T. Reid, National Advisor of the Arnold Air Society and Assistant PAS&T at the University of Cincinnati, presented the history of the Arnold Air Society.

The eight Cadets who attended the conference and their home towns are; Raymond Goelz, Cincinnati, Ohio; Harry K. May, Youngstown, Ohio; Salvatore F. Divita, Brooklyn, New York; Ernest E. Sanchez, Los Angeles, California; William M. King, Minneapolis, Minnesota; Junior F. Dozier, Sylvester, Texas; Richard A. Armstrong, Hamlin, Texas; and William O. Savage, Tampa, Florida.

Speakers' table at San Jose Squadron installation dinner; left to right: Dr. Elmer H. Staffelbach; Thomas F. Stack, AFA VP; Lee Jones, squadron commander; Mayor Clark L. Bradley; Mrs. Bradley; and Henry A. McCillin, commander-elect.

Thomas F. Stack, right, AFA Reg'l VP, presents Dr. E. H. Staffelbach with San Jose Squadron Citation.

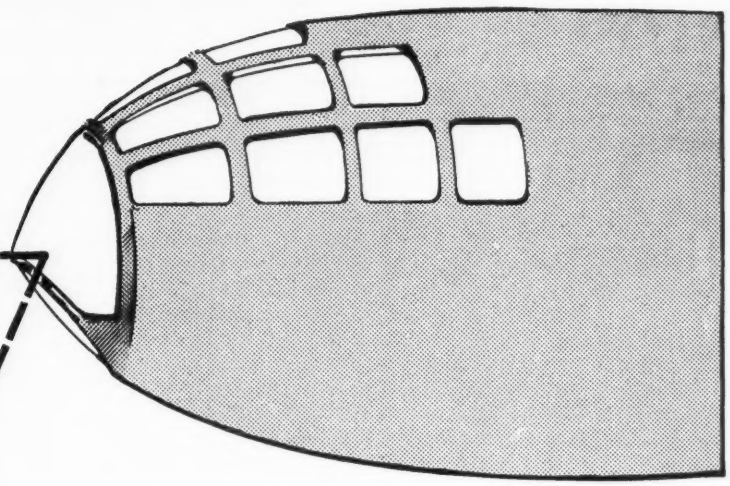
California AFA Squadron Awards Merit Citations

Dr. Elmer H. Staffelbach, professor of education at San Jose State College and commanding officer of the 9367th VART Unit, was awarded the San Jose AFA Squadron's annual Airpower Award, the "Citation of Merit," "in recognition of his outstanding contribution to American Airpower as one of the originators of the AF's Air-Sea Rescue Service, which has been directly responsible for the saving of many lives."

The second "Citation of Merit," which was presented at the Squadron's second annual airpower installation dinner at Lou's Village on March 31, was presented to the Santa Clara County Chapter of the National Safety Council for their support of the Air Safety Committee. Accepting the award for the Safety Council was William J. Moore, managing director of the local chapter and a member of the Air Force Association.

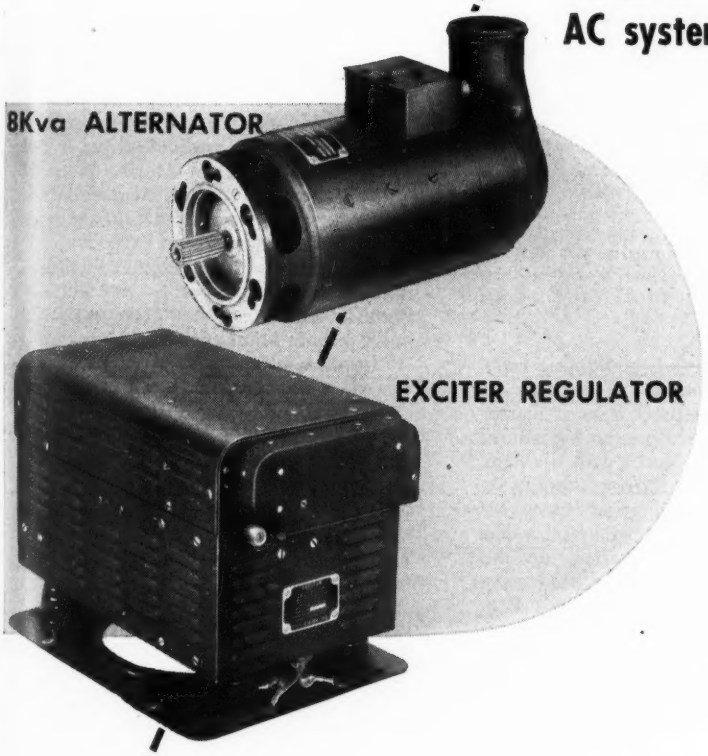
(Continued on page 48)

VISIBILITY



...above and beyond the horizon

when EICOR'S "electronamic team" supplies your AC system with electronically controlled power



above the horizon — it's Eicor's electronamic team supplying the safe, sure, AC power your nesi-glass deicing system needs for perfect flight-vision under all flying conditions. ***beyond the horizon*** — again this dynamic Eicor team provides the ultimate in closely controlled alternating current, the power necessary to give vision to the far-reaching, far-searching eyes of your aircraft's radar and its associate equipment. You can be assured of the flight-reliability of these units. Designed to rigid and exacting AN Specifications, the Eicor 8Kva Alternator and Exciter Regulator have proven their dependability of performance over thousands of operational flying hours. The Eicor 8Kva Alternator will generate 115/208 volts, three phase, or 115 volts, single phase, at frequencies of 380-1000 cycles and over a speed range of 3800-10,000 rpm. Sensitive voltage regulation and field excitation for the alternator is supplied by its team-mate, the Eicor electronic Exciter Regulator. This Exciter Regulator can also be used in any power circuit, for excitation supply, having a range rating characteristic output of 0.5 to 5.5 amperes DC and 14.0 to 170.0 volts D.C.

AVIONIC EICOR PRODUCTS

EICOR, INC.

1501 west congress street
chicago 7, illinois

Leading the way in electronic controls for aircraft power conversion equipment

T/Sgt. Morrie D. Skarupsky, with 437th Troop Carrier Wing in Korea, distributes stationery, stamps, books, gum and other items to wounded airmen in a Far East hospital tent. Gift packages were sent to the Far East by members of Metropolitan Philadelphia AFA Squadron for distribution to AF's wounded.

Tom Stack, AFA's Regional Vice-President of the Far West Area, was toastmaster of the evening, and he presented the 1951 panel of Squadron officers. Henry A. McMillin was recently elected commander of the Squadron.

Gifts Sent to Airlift

Gift packages of stationery, stamps, books, gum, and other items which were sent over by the Metropolitan Philadelphia Squadron of AFA were recently distributed to men of the Korean Airlift at a base in Japan.

T/Sgt. Morrie D. Skarupsky, stationed with the 437th Troop Carrier Wing, presented the gifts to the airmen. Skarupsky hails from Philadelphia and is a charter member of the Metropolitan Squadron of the AFA. He was among the first Air Force Reservists who were involuntarily recalled to active duty in the Korean crisis and was assigned to the medical unit in the 437th, a Reserve Wing which was called to active duty as a unit from Chicago last August.

After two months of intensive training at Shaw AFB, South Carolina, the wing was shipped overseas to an air base in Southern Japan and began operating on a round-the-clock basis as a vital function of the Combat Cargo Command. The wing flies badly needed supplies to the men at the fighting front and transports wounded to Japan.

M/Sgt. Ed Gannister, also a charter member of the Metropolitan Squadron, has been serving in Korea with the First Provisional Troop Carrier Group, a mainstay of the US Far East Air Force's 315th Air Division (Combat Cargo) since the beginning of the Korean War. He has joined Skarupsky following the merger of the First Provisional into the 437th Troop Carrier Wing. Gannister is an aircraft and engine mechanic.

I. E. Brodsky, 1133 Arch Street, Philadelphia, is the present commander of the Metropolitan Squadron, AFA.

AFA Air ROTC Medal

The AFA Air ROTC Medal will represent the highest achievement possible within the AFROTC program at the Montana School of Mines, according to Captain Allan G. McClure, executive officer of the detachment.

In consideration of the prestige and importance afforded the Air Force Association ROTC Silver Medal by the contributions of AFA toward the program and development of the Air Force, that award will be presented each year to the outstanding second year advanced cadet, according to Captain McClure.

AFA STATE ROUNDUP

CALIFORNIA

San Francisco: "Russian motives and aims" was the subject of an address by Ben Adams, former OSS officer, at the recent fourth anniversary meeting of the San Francisco Squadron, AFA.

Seventy-two members and guests also heard Lt. Ross Radick, B-29 navigator with 35 missions over Korea, discuss present flying conditions in that theater.

The Squadron honored the 349th Troop Carrier Group at a meeting on March 15. The Group has been recalled to active duty.

Due to the growing numbers on the Squadron Honor Roll, the Squadron has adopted a resolution waiving Squadron dues for members on active duty.

GEORGIA

Savannah: "We should move our air operations into Manchuria as far as necessary to carry on good strategic warfare," General Carl Spaatz, former Chief of Staff for the Air Force, said recently.

Speaking as an individual, and not reflecting any official views, General Spaatz addressed the annual installation banquet of the Savannah Squadron of the Air Force Association.

He said he felt sure Stalin has promised Russian air support to the Chinese Reds in the event U. N. forces should move on into Manchuria and China, and "if he chooses to use his airpower, he will be fighting us on conditions that are most disadvantageous to him."

"We could fight Russian airpower in that area without use of too much more force than we have there now", he said, because of Russia's supply difficulties and lack of oil. "We could bomb the Trans-Siberian railway at any point we wished."

General Spaatz was introduced by Brig. Gen. Haywood Hansell, USAF, retired. Maj. Gen. Frank O'D. Hunter presided at the banquet.

City and county officials and business leaders were guests at the banquet.

ILLINOIS

Chicago: In an attempt to create a spirit of fellowship between the Royal Air Forces Association and US Air Force Association, Chicago AFA Squadron No. 41 has been chosen by AFA to carry on active liaison work by means of correspondence with the Bromley, Kent, Branch of RAFA.

MICHIGAN

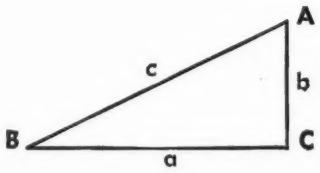
Detroit: The annual "Airpower and Installation Dinner" of the Detroit AFA Squadron No. 1 was held on March 18 in the new Squadron home, Veterans Memorial Building.

Installation was conducted by Wing Commander Frank W. Ward with Lieutenant Claude Pinkerton of the 5th Air Rescue Squadron as principal speaker.

(Continued on page 50)

LITTLE THINGS ARE IMPORTANT!

Arma Electrical Resolver



Making important things little is a militarily vital objective of the accelerated engineering activity which characterizes Arma. Making them little and interchangeable and more accurate...all at the same time.

An example of advancing miniaturizing accomplishment is the new lighter, more accurate and interchangeable Arma electrical resolver. This is one of the computing components that replaced a formidable aggregation of gears, bearings and slides previously used in fire-control equipment to solve the trigonometric functions. It is the "thinking" mechanism in modern military instrumentation which solves such gun-laying equations as $a = c \sin A = c \cos B$ instantaneously.

The mechanical resolvers of World War II have since given way to the electrical. Application of the new miniature Arma electrical resolvers to the needs of all the Services is widening as rapidly as accelerated engineering can push it. This is another way Arma engineers work to help make America safe against those who wish to destroy it.

QUALITY ARMA INSTRUMENT PRECISION

ARMA CORPORATION

254 36th STREET, BROOKLYN 32, N. Y.

SUBSIDIARY OF AMERICAN BOSCH CORPORATION

PRINCIPAL PRODUCTS

Gyroscopic Compasses • Gunfire Control Systems • Stabilizing Devices • Automatic Control Switchboards • Electrical & Electronic Equip. Electrical Computers • Airborne Instrumentation • Navigational & Plotting Instruments • Mechanical Computers • Servo Mechanisms

ROUNDUP CONTINUED

Lieutenant Pinkerton recently returned from Korea.

Honored guests included Robert S. Ball, aviation editor of Detroit News, and Corporal Maxwell, Selfridge AF Base.

Past Commander Berge Manoogian presented on behalf of the Detroit Squadron a leather letter case to Richard A. Goldfogle, Wing Secretary-Treasurer, for his devotion and assistance to the Detroit Squadron. Miss Bertha Pappas was presented a corsage by Mr. Manoogian for her outstanding service to the Squadron as treasurer.

Detroit Squadron No. 1 meets the third Monday each month at the new Veterans Memorial Building.

NEW YORK

New York City: "Air Power for Peace and the Battle for Britain" was discussed by Air Vice Marshal G. E. Gibbs, CIE, CBE, MC, Head of Military Staff Committee of UN, at the annual banquet ending fiscal year of the Manhattan Squadron No. 1, AFA, staged recently at Hotel Russell, New York City.

Colonel Krummel, assistant to Commissioner Wallander in the Civil Defense Department of New York City, was guest speaker at a recent meeting of the Manhattan Squadron No. 1. He discussed Russia and the atom bomb, New York as a possible target, and the German experiences with large scale bombings. He also spoke of debunking the bomb and the importance of keeping people calm in thinking about it.

Harold Glasser, 2255 Grand Concourse, N. Y. C., is the newly-elected commander of the Squadron.

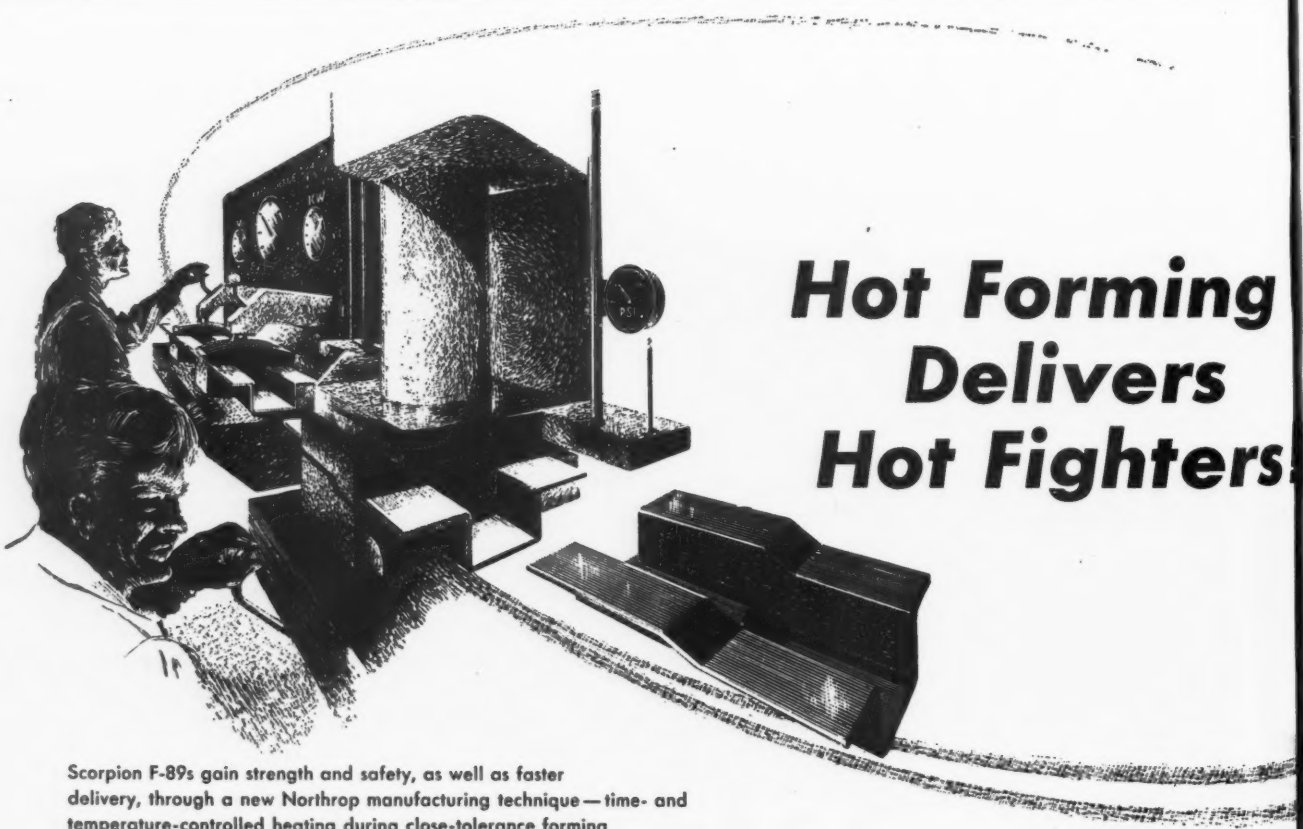
Herb Himberg, left, commander 2nd New York AFA Group, congratulates Richard Lasher as latter takes over as new commander of the Staten Island Squadron.

NEW JERSEY

Paterson: The third Annual Beefsteak Supper was held by the Passaic-Bergen Squadron, AFA, at the Brownstone House in Paterson recently.

This year the affair served a dual purpose. First, as a public introduction of the newly-installed officers, and secondly, as a going away party for the members that are in the USAF Reserve and were being recalled to active duty.

Robert Westerveld, the retiring commander, welcomed everyone present on behalf of the Squadron and thanked the



Hot Forming Delivers Hot Fighters

Scorpion F-89s gain strength and safety, as well as faster delivery, through a new Northrop manufacturing technique—time- and temperature-controlled heating during close-tolerance forming of thick-section alloy extrusions. • Manufacturing resourcefulness at Northrop saves thousands of man-hours per month. The result is consistently high records in producing Northrop F-89 Scorpions . . . fast, heavily-armed, electronic search equipped . . . deadly modern counterparts of World War II P-61 Black Widows; and the new standard all-weather interceptors of the U. S. Air Force.

NORTHRO AIRC
Pione Builde

Past Commander Berge Manoogian thanks Lt. Claude Pinkerton for report on air rescue activities in Korea. Robert Ball, Av'n Editor, Detroit News, looks on.

officers and committees with which he has worked during the past year.

Guests at the affair included John J. Currie, commander of the New Jersey AFA Wing, and James Dohler, Secretary of the Wing.

Members of the Squadron who returned to active duty on May 1 were: Charles Claeys, Al Boonstra, Arthur Cousemaker, Al Campbell, Frank Dragone and Marie Nativo.

Joseph Petak, 463 Radcliff Street, Wyckoff, N. J., is the newly-elected commander of the Squadron.

OHIO

Dayton: Dayton AFA Squadron No. 1 is currently making plans to handle the 1951 Ohio State Wing Convention at the Biltmore Hotel on May 26. A day of meetings will be climaxed by a banquet featuring a "name" speaker. Invitations will be extended to manufacturers' representatives, Dayton industries and top civic personalities.

Beginning the same day and continuing through May 30, the Squadron will stage the Third Annual Wright Memorial Glider Meet at the South Dayton Airport. Again this year sponsors for the various activities are joining with the Dayton group to make the Meet a success.

A contest to select a Miss Air Force Association, who will present the trophies to the Glider Meet champion, is under way, according to Gerald V. Ruble, 1638 Newton Avenue, commander of the unit.

Toledo: John Bueschen, vice-commander of the Toledo (Joe E. Brown) Squadron, AFA, has announced that the Squadron is the first Veterans' organization to request volunteer registration blanks from the Lucas County Civil Defense unit. These blanks were distributed at the last meeting of the Squadron.

Squadron members have unanimously adopted a proposal made by Group Commander Jamille G. Jamra that the Squadron, as a group, offer blood donorship for the Civil Defense effort. The offer has been made to the proper authorities and D Day of Operation Corpuscle is expected at an early date.

In order to raise Squadron funds, a paper drive was held on April 14. The use of two trucks was donated.

Paul Bolinger, 2014 Kensington Road, is secretary of the Squadron.

Alodine®

PROTECTS ALUMINUM AND ANCHORS THE PAINT FINISH

EASY TO USE... Process is foolproof and chemical solution can be applied by dipping, spraying, brushing or flow-coating.

ELECTROLESS... Alodizing is a chemical conversion process.

ECONOMICAL... Low chemical cost, short coating time and low temperature keep overhead down.

EFFECTIVE... The tough, durable Alodized surface makes paint stick to aluminum and resists corrosion. "Alodine" meets these Service specifications: MIL-C-5541; MIL-S-5002; AN-F-20; 16E4 (Ships).

Brush Alodine®

Brush "Alodine" is easily and quickly applied to assembled aircraft in the field, shop, or hangar. Cleaning and coating chemicals for Brush Alodizing are shipped in bulk or in the convenient Brush "Alodine" Chemical Kit No. 1. This Kit contains enough chemicals to treat about 1000 square feet of surface and is an ideal package for use at airfields of commercial airlines or of the Armed Services anywhere.

Use "Alodine" and Alodized Aluminum for Maximum Product and Finish Durability!

STANDARD RUST PROOFING PRACTICE THE WORLD AROUND — CHEMICALS ACP PROCESSES

Write for Descriptive Folder.

Pioneering Research and Development Since 1914

AMERICAN CHEMICAL PAINT COMPANY

AMBLER, PA.

Manufacturers of METALLURGICAL, AGRICULTURAL and PHARMACEUTICAL CHEMICALS

LESSONS

CONTINUED

General Ridgway's "Operation Killer" was aptly named. Militarily, the objective is to destroy enemy troops and weapons, with the gaining of real estate only a means to that end. Politically, or diplomatically, it is the end in itself. Thus, in Korea a strategic withdrawal, with heavy destruction of enemy troops accompanying it, is temporarily at least a military gain and a political setback. The Christmas advance to the Yalu, on the other hand, was a political gain and a military setback.

In evaluating the success of the military mission, it is necessary to understand the nature of the enemy we are facing. Red China's casualties in the war are estimated in the hundreds of thousands. Everywhere we heard that her hospitals are terribly pressed. No one would venture a guess as to how heavy their war losses must be before Red China's leaders conclude that Korea is not worth the sacrifice. It is generally assumed that her casualties are already greater than a democracy such as ours could tolerate, and quite possibly greater than Russia's leaders would permit. It is true that Russia's casualties at Stalingrad were enormous, but it is also true that losses incurred in defending one's homeland are quite different than losses incurred on foreign soil. With Russia pulling the strings of war without suffering the losses of war, the enemy's casualty rate is perhaps higher than could be expected elsewhere.

However, with Operation Killer the military order of the day in Korea, the weapon accountable for most of the killing must, of necessity, take on special significance. In Korea the airplane is this weapon. The scope of its destructive power against ground troops, given little consideration in the past, is so great that we must conclude:

The second great lesson to be learned from Korea is that airpower has become the predominant destructive force against ground troops in the field.

The Air Force, repeatedly under fire since World War II for its damage claims, has vastly *underestimated* the number of casualties it has inflicted on enemy troops in Korea.

GHQ estimates based on Prisoner of War interrogation and preliminary field reports have credited our airpower with 47 percent of all enemy casualties in the Korean war —an unusually high figure, based on past war experience. We believe, however, that further evidence will reveal that this figure must be revised upward.

Field reports from Army sources, we learned, now indicate that air attack probably has been responsible for more, and perhaps twice as many, enemy casualties in Korea as ground attack. Whatever the final estimate might be after all the evidence is in, there is no question but that—once air superiority has been attained—airpower becomes a far greater destroyer of troops in the field than is ground power.

This new development in warfare is full of meaning.

As long as air superiority is on our side, as long as we have command of the air over our troops, we can exploit this great destructive power so forcefully demonstrated in Korea. Under these circumstances, airpower becomes the only hope of offsetting the enemy's overwhelming weight of numbers and his willingness to accept abnormally high casualties.

In Korea it was the prevailing opinion that airpower—through ground support—had made it possible for UN forces to hold the peninsula. General MacArthur called the airpower effort "monumental," and he added, "airpower has saved our Army in Korea on numerous occasions." Lt. Gen. Frank W. Milburn, commanding the First Corps, US Army, told us, "We couldn't have carried on the Korean

(Continued on page 55)

TRAINED VETERANS...

are cleared to come in!

That's right—you service-trained technicians have the opportunity to apply for valued ratings in the U. S. Air Force.

There are literally hundreds of Air Force position vacancies that must be filled by skilled men who need little or no refresher training. They will be initially assigned to a nearby Air Force Base.

If you have had technical schooling in any arm of service—you are the men your Air Force needs—*now!* In return, if you qualify, the Air Force offers you a rating in keeping with your previous military service plus your civilian experience.

Get full details at your nearest U. S. Army and U. S. Air Force Recruiting Station today!

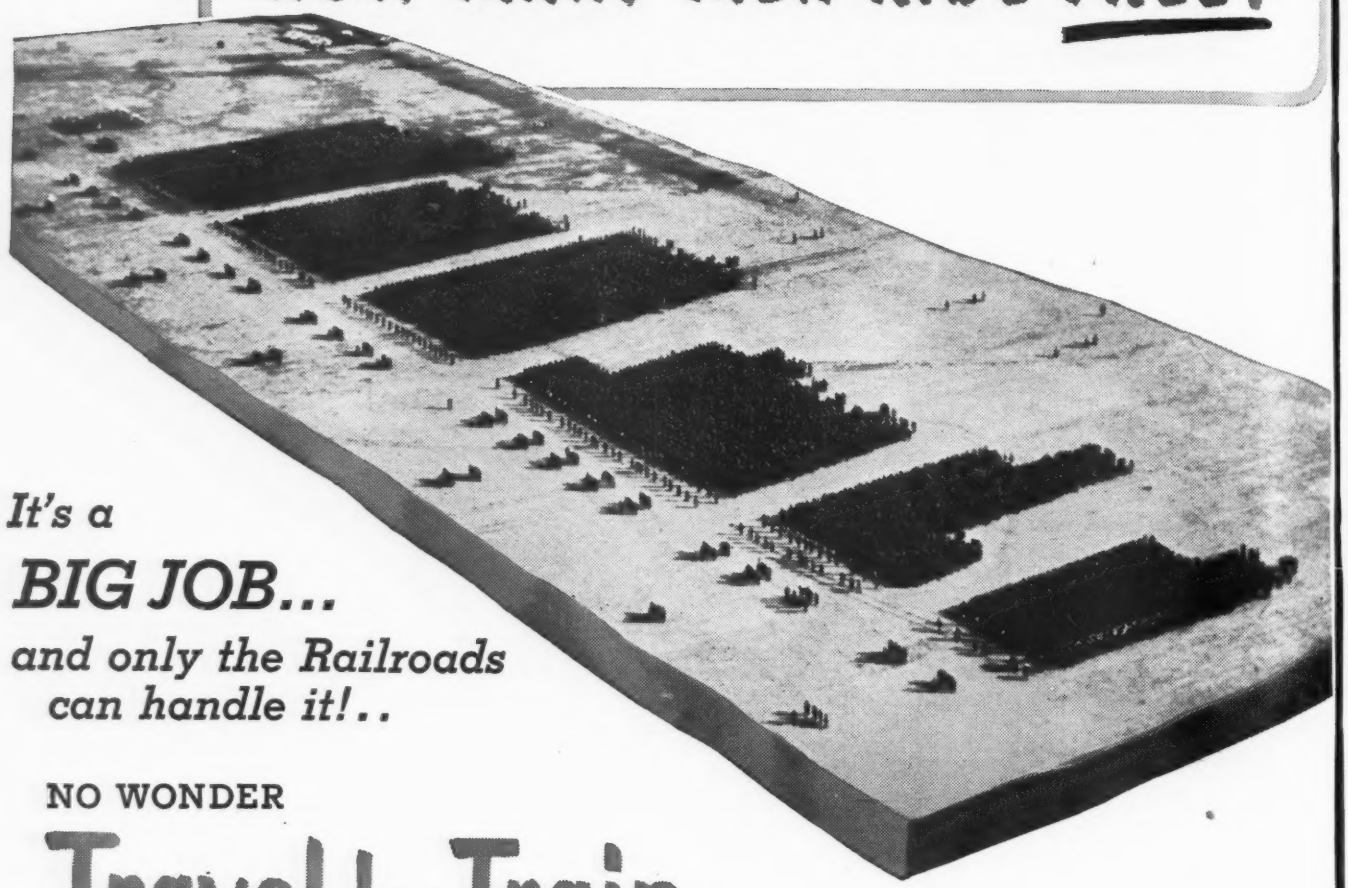
SKILLS NEEDED NOW — Radio, radar, weather, camera repair, engine maintenance, gun turret maintenance . . . these are not all. Get a complete list at your nearest Air Force Base or Recruiting Station.

RECRUITING U.S. ARMY U.S. AIR FORCE

U. S. AIR FORCE

When a Full Division moves by rail . . .

HOW MANY MEN RIDE FREE?



It's a

BIG JOB...

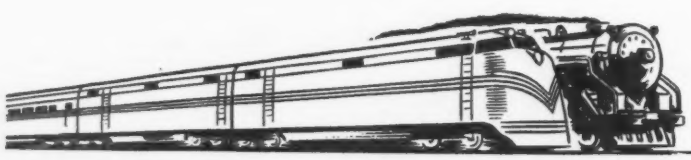
and only the Railroads can handle it!..

NO WONDER

Travel by Train is FIRST with the SERVICES!

• Of course, troop movements go by train! It's the most efficient, most convenient way—keeps organizations together—operates any time, everywhere. And the railroads allow 10% discount from regular passenger fares for all personnel of the Department of Defense traveling on transportation requests. That means that one man in every 10 travels *FREE*—a clear saving to the government of over $7,500,000 in 1950.

• *Yes, only the railroads are capable of moving troops in division strength. Remember, too, furlough fares mean bargain fares to the officer or man on leave. For any travel, any time, you can depend on*



THE RAILROADS OF THE UNITED STATES

operation without airpower." Lt. Gen. Edward M. Almond, commanding the Tenth Corps, US Army, added, "The Air Force has done a splendid job in carrying out it air support mission. The air-ground team is working most effectively." This was the tenor of comment from ground men all down the line.

But now the airplane emerges, not only as a superior support weapon to assist our ground troops in killing the enemy but, in itself, and by a wide margin, the UN's most productive "troop-killer." This is a new role for airpower.

However, we must be bluntly realistic about the air weapon in relation to our current airpower position. We must consider the second lesson of Korea *in reverse.*

We know from World War II experience that Russia a past master in attack aviation. We have the report of General Carl Spaatz, first chief of staff of the Air Force (April AIR FORCE) that Russia is assured command of the air over Europe and Asia for several years ahead, at least; that in Western Europe she holds a 10 to 1 advantage in modern planes and will hold at least a 5 to 1 margin over the free world at the end of 1952.

In the face of these alarming facts, we must consider, first, that Russian airpower possesses equal if not greater destructive force against ground troops as the force we have revealed with our own airpower in Korea; second, that this destructive force is dependent upon sufficient air superiority to insure command of the air; third, that Russia has this command of the air and there is no evidence she cannot maintain it; and fourth, that under this set of circumstances we must be prepared to accept, in any war with Russia and perhaps in a lesser war, the casualty rates which modern war imposes upon an Army that does not have adequate air protection—the type of intolerable casualty rates which Red China has suffered in Korea.

All this compels us to recognize once and for all that airpower has revolutionized our traditional military and diplomatic concepts, and prompts the conclusion that:

The third great lesson to be learned from Korea is that airpower must be the keystone in the military defense structure of the free world.

Our policy makers are strangely inconsistent in their evaluation of airpower as an instrument of national and international policy. Shortly before our departure for the Far East, we attended a conference at which State Department leaders acknowledged, in the course of their comments on the world situation, that our long range airpower provided the only major deterrent to all-out Russian aggression. These same leaders, however, revealed a lack of appreciation for the necessity of overwhelming airpower for the protection of our troops in Western Europe. If our diplomats are truly interested in deterrents, as they must be, they couldn't find a better one than the UN's command of the air over Western Europe.

On the other hand, we suspect that our policy makers are more dependent upon airpower than they themselves realize. Their dependency on the deterrent effect of our strategic airpower, and its resultant effect on national policy, is too obvious to discuss here. We refer to the official policy which confines our forces to Korea, as against the alternative of carrying the fight to the Reds with aerial bombardment of their Manchurian bases. This official policy of containment obviously centers in the hope that we can kill sufficient communists in Korea to force Red China to give up the struggle and settle on "honorable terms." General Bradley said as much in an address in Chicago on April 17. "Our present objective in Korea," he explained, "is to stop the Communists—to kill as many as we can at the least possible cost to ourselves."

(Continued on page 59)

AT REMOTE TRAINING BASES OR OVERSEAS... here's a dependable link with home!

hallicrafters

international long-range

Precision Radio

Regular Price $49.50

S-38B

You can buy it in your Post Exchange, Hallicrafters famous S-38B. Covers broadcast band and three short-wave bands ... brings in remote U. S. stations and reception from all over the world.

Precision-built by Hallicrafters—it is *all radio!* It is functionally-designed by Raymond Loewy, in steel cabinet; AC-DC.

COMPANY OFFICERS find this radio a sound investment for unit funds, because it serves *all personnel* with fine radio reception no matter where your location. No frills . . . just the finest radio built!

SPECIAL MILITARY PRICES AT PX's and SHIP STORES THROUGHOUT ARMED FORCES

S-72

OVERSEAS FAVORITE

long-range portable

Here's the one pal every officer and enlisted man wants to take along to overseas assignment—a precision radio that really tunes in the stations back home. Powerful 8-tube set, plus rectifier. AC-DC or batteries. Built-in loop antenna for standard reception, plus 61-inch collapsible whip antenna for short-wave reception. Input jack for headphones, and space inside for power cord and headphones.

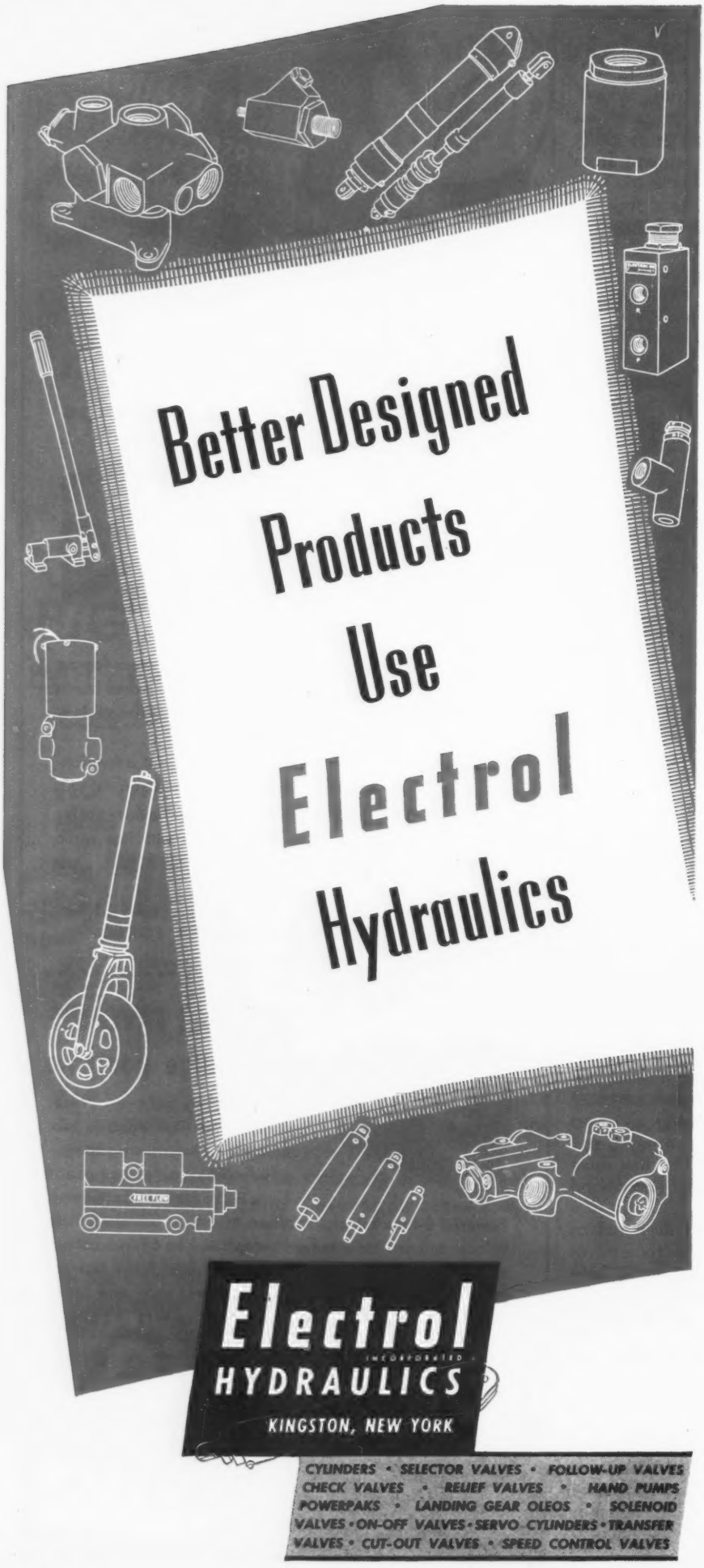
Regular price of S-72 $109.95 (less batteries)

Ask your PX officer or write to Dept. A Special Military Representatives listed below:

East Coast
George E. Abbott & Co.
756 Fourth Avenue
Brooklyn 32, New York

West Coast
Foley-Williams Co.
537 W. Broadway
Long Beach 2, California

HALLICRAFTERS—WORLD'S LEADING MANUFACTURER OF PRECISION RADIO & TELEVISION • CHICAGO 24, ILLINOIS



The Airman's Bookshelf

WAR IN KOREA: The Report of a Woman Combat Correspondent

By Marguerite Higgins. Doubleday & Co., $3.00

Among the many controversial figures of the Korean adventure, Maggie Higgins is perhaps the stormiest petrel of them all. Excluding General MacArthur, of course.

A woman in a man's world is at best an anomaly. When that world is the bloody, muddy ruck of war her position is even more incongruous. But Maggie passed all her tests with flying colors, including a most amusing feud with a male co-worker representing the same metropolitan daily. She fought the brass, she fought her fellow writers, she fought almost everyone except the North Koreans and there is many a GI who would swear she'd make a good job of that too.

From a historical and technically military point of view her reporting is far from brilliant. Her book is not the story of *the* war in Korea, but of Marguerite Higgins' own private war. And an extremely interesting little war it is, too.

She has a quick ear for a descriptive phrase and some of her accounts of men in battle deserve to rank with the finest of their kind. She is at her best when writing of people rather than events, when interpreting emotions rather than strategy.

She has paced herself too slowly and her running account limps in places. But what she does well she does very well. This is not the definitive account of the Korean war, but it is lively, sprightly personal history.

IS ANOTHER WORLD WATCHING? The Riddle of the Flying Saucers

By Gerald Heard. Harper's, $2.75

Just about the time you think the flying saucers are interred for the duration another book comes along to arouse your curiosity. Gerald Heard definitely aligns himself against the skeptics and with the ranks of the believers. He lists and weighs the evidence to date concerning the actual existence of the so-called saucers, then speculates upon the nature of the craft, and their possible crews. It is interesting and plausible stuff, handled from a point of view that has not hitherto been voiced. He explores the mass hallucination solution and rejects it summarily. Then the secret weapon theory—that the objects were American, or British, or Russian, or from other countries experimenting with new methods of flight. Throwing this solution out the next question is—if they don't come from the earth, then from where? But you'll have to read the book to find the answer.

His landing was safe before he took off!

How can the pilot be so sure – before he ever leaves the ground – that his ship is mechanically perfect?

Because his ship was carefully tested with Greer Equipment. Because it was tested under conditions far more severe than he will ever meet in normal flight. Because Greer precision machines have made aircraft testing incredibly accurate, leaving nothing to guesswork.

Working closely with the army and navy air forces, airlines, aircraft and engine manufacturers, Greer has developed a complete line of aircraft maintenance and test machines to service all systems and components for all aircraft.

To meet specific aircraft requirements, many special machines have been designed – and a staff of *creative engineers*® is waiting to talk over your problem at your convenience.

If you have a problem, call us, won't you? There is no cost, no obligation. Write today.

WHAT *"creative engineering"* MEANS AT GREER

1. Design Engineering
. . . a staff of top designers with many years of experience in design of precision test equipment.

2. Production Engineering
. . . manufacturing experts who know and use the latest methods for building absolute accuracy into quality test equipment.

3. Service Engineering
. . . field representatives who are *authorities* on the servicing of aircraft accessories and systems.

GREER
TEST EQUIPMENT

Known the World Over
for Accuracy, Dependability and Service

GREER HYDRAULICS INC. • 455 EIGHTEENTH STREET • BROOKLYN 15, NEW YORK

Field Office: Greer Hydraulics, Inc., 298 Commercial Building, Dayton, Ohio

Representatives: Thomson Engineering Service, 708 Hemphill St., Fort Worth 4, Texas • Harold E. Webb, 918 N. Kenilworth Ave., Glendale 2, Calif. Daun & Bleck, Rua Dos Fanqueiros, 262,1.° Lisbon Portugal • Astra Aircraft Corp., 29-31 Simmonds St. Ext., Johannesburg, South Africa

Zero in on Pepsi

and you'll get...

MORE BOUNCE TO THE OUNCE

WHY TAKE LESS . . . WHEN PEPSI'S BEST

That objective is clear enough. The problem is, it is not being supported, at least not in terms of emphasis in our mobilization effort. As we have pointed out, the airplane is–by a wide margin–our best destroyer of communists in Korea. Thus, airpower is–though not recognized as such –the backbone of our official strategy, as defined by General Bradley. Our policy makers, under their own terms, must depend on it as much or more than those who would send our bombers across the Yalu. Therefore, to support their own strategy–since the airplane can destroy enemy troops in other parts of the world as well as in Korea–one would expect an adequate buildup in airpower development. Surely, an all-powerful US Air Force should be in the making.

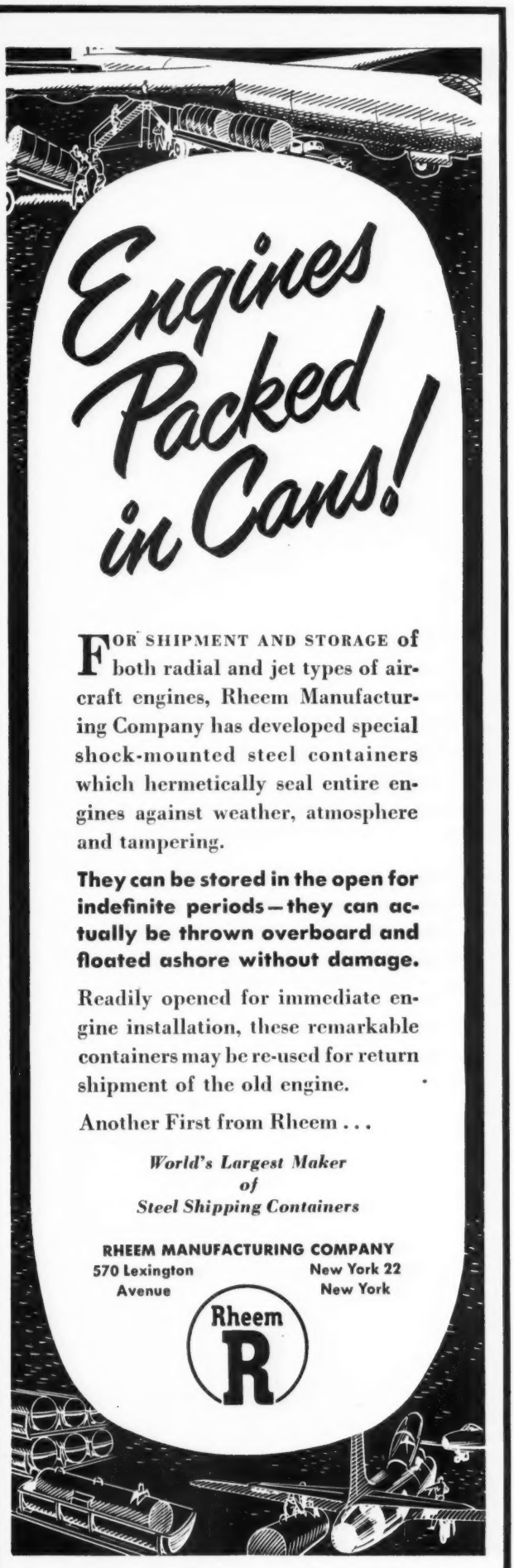
Yet, General Spaatz reports that under prevailing policy an Air Force of *only 50 modern groups* is actually being produced, and that we have slowed down on our whole airpower buildup. This seems not only inconsistent but a direct invitation to disaster.

Whether you take the stand that the calculated risk involved in bombing Manchuria is too great, or that we must take that risk now as the lesser of two evils; whether aggression, or will hasten it; whether you consider the British Isles a dependable military base, or an expendable atomic target; whether you feel we must stop Russia short of North America, or make our own continent a huge air and sea base for the world–no matter which "side" you're on in the so-called "great debate", the determining factor in your argument must be, it seems clear, the airpower capability of the free world compared to that of Russia.

In view of this, we believe, airpower must be raised in the national mind above the confusions of inter-service strife, above the shackles of an unrealistic and outmoded "balanced force" concept, and certainly above partisan politics. We must forget the service feuds of the past that still plague us to the point that when the capabilities of airpower are cited it is charged that one believes airpower can win a war alone; when it is argued that the Air Force must be, in keeping with its responsibilities and destructive power, the major service in our military establishment, it is charged that this is disparaging to the other two services. The war in Korea–once it is viewed at close range–dispels all such shallow considerations. The doughboy is delighted that airpower is capable of such destructive force; he just wants to get the job done, he doesn't care how, and get back home. Our admiration for the job being done by the Army, Marines and Navy, in Korea and wherever else they may be, is as strong as the next man's. We believe firmly that all three services have a vital role in combating aggression. But we cannot, in all honesty, fail to recognize that airpower is the dominant force in modern war.

Official thinking in this country is seemingly unaware of the military and diplomatic revolution that is taking place as a result of airpower development. In the national interest, we urge that the Air Force Association continue and intensify its aggressive policy of bringing the story of this development to the people. We will urge that the Congress assert itself and raise airpower to the position it deserves in our military and diplomatic structure.

If the war in Korea does not force a departure from the surface thinking that permeates our present military strategy, if it does not lead to full realization that airpower is the determining military factor in our foreign policy, if it does not hasten the establishment of a sound airpower policy for all the free nations–then much of our military effort in Korea will be in vain, and as a nation we will be judged guilty of gross negligence before the facts of modern war and modern diplomacy.

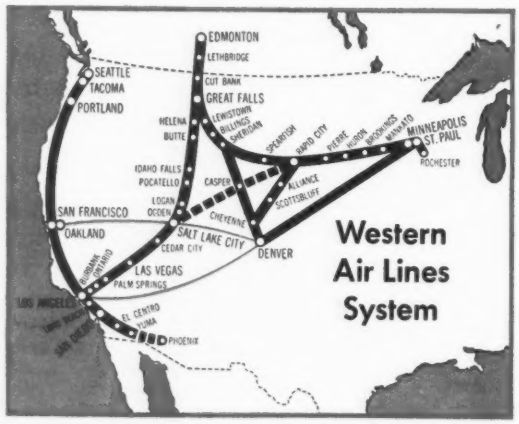

Engines Packed in Cans!
FOR SHIPMENT AND STORAGE of both radial and jet types of aircraft engines, Rheem Manufacturing Company has developed special shock-mounted steel containers which hermetically seal entire engines against weather, atmosphere and tampering.
They can be stored in the open for indefinite periods—they can actually be thrown overboard and floated ashore without damage.
Readily opened for immediate engine installation, these remarkable containers may be re-used for return shipment of the old engine.
Another First from Rheem . . .
World's Largest Maker of Steel Shipping Containers
RHEEM MANUFACTURING COMPANY
570 Lexington Avenue
New York 22 New York
Rheem
R

As America's Oldest Airline begins its second quarter-century...

In April, Western Air Lines became the first airline in the nation to complete 25 years of continuous operation. Air transport's growth during this quarter-century has speeded the development of the West by setting new standards of travel and communication.

Western is proud to have pioneered from its original route between Los Angeles and Salt Lake City, started in 1926 with two-passenger, open cockpit biplanes, to its present 5000-mile system, serving each day with modern, dependable airplanes, 45 cities in 13 western states and Canada.

Western is proud to have developed new equipment and techniques that have been adopted by the industry; proud that in addition to meeting the needs of commerce and of the postal service, its record shows many jobs well done for the military during World War II—including the operation for over three years of a vital route between Montana and Alaska. Today some of Western's personnel and aircraft are engaged under Air Force contract in the Pacific Airlift from California to Tokyo.



On its Silver Anniversary, Western pledges its continued effort to strengthen the nation's air transport facilities—for peace, mobilization or war.

WESTERN AIR LINES

25 years of progress by America's scheduled airlines is reflected in the contrast between Western's modern airliners and the little M-2 biplane that made Western's first flight on April 17, 1926. In continuous operation since that day, Western is America's Oldest Airline.

Volunteers Are Needed

Four hundred thousand volunteers are needed by the Ground Crew Observer Corps to extend the system of civilian aircraft observers across the entire northern part of the United States and along both coasts. This was recently announced jointly by Air Force Headquarters and the Air Defense Command.

A total of 500,000 civilian volunteers will be needed to man the entire system.

The new GOC areas of North Central and Southeastern United States will require 300,000 volunteers and an additional 100,000 are still needed for the GOC now operating on the East and West Coasts and the Great Lakes area. The more than 100,000 who have already volunteered have been operating the initial 8,000 observation posts and 26 filter centers.

The volunteer program will be handled by Civil Defense Directors within each state area. The Air Force, which sponsors the GOC, will direct the overall training program.

The expanded program calls for 11,400 new observation posts and 24 filter centers, augmenting the present Air Defense System. The organization is scheduled to be completed July 1, 1951.

The observers will supplement the radar system by observing and reporting the movement of aircraft flying at low altitudes over the United States. Ground observers compensate for the "line-of-sight" limitation of radar stations.

Observation posts are located approximately eight miles apart and each will be manned by a minimum of 25 civilian volunteers, an increase of five over previously announced staff minimums. This reduces the average number of hours on duty to two per day for each volunteer.

Ground Observer Corps filter centers will be located in cities providing good telephone connections for the area concerned. Each center will be operated by a group of approximately 500 volunteers. Five officers and ten airmen will be on duty at each center for supervision and training.

The Ground Observer Corps plays an important part in air defense. Radar, like television, operates on a line-of-sight principle, and gaps in the system are created by mountainous terrain and the curvature of the earth. The civilian volunteers fill these gaps by reporting the movement of low flying aircraft.

Once the observer has sighted an aircraft, he telephones an "Aircraft Flash" call to his assigned filter center where the information is plotted on grid-maps of the area, along with reports from other observation posts. As the aircraft's "track" is plotted on the filter center map, it is telephoned immediately to a Ground Control Interceptor Unit of the Air Defense Command where the plane is identified either as "friendly" or "unknown."

If the aircraft cannot be identified, fighter-interceptors make an interception for positive identification.

Should a reported aircraft be identified as an enemy, a civil air raid warning would be initiated. Then the regional civil defense organization would set in motion the planned emergency measures designed for such a contingency.

Guard Wants 300 Pilots

Army units of the National Guard need approximately 300 pilots to fill existing vacancies, Major General Raymond H. Fleming, Chief, National Guard Bureau, said in a recent announcement.

All pilots are needed to fly light aircraft used for artillery spotting, scouting, rescue missions and many other assignments. Later, under projected plans, they may fly helicopters.

Former pilot officers of the Army, Navy, Air Force, Marine Corps and Coast Guard who are not above the maximum age limit for the unit vacancy to be filled are eligible for the Army Guard flying assignments. Those who meet requirements may take training at Fort Sill, Oklahoma. Training is dependent on available quotas.

Pilot training and appointment as Army aviators in Army Guard units are also open to qualified non-pilot applicants below the age of 30 at the time of application for pilot training. Applicants must first qualify for and be Federally recognized as officers in units with Army aviation vacancies. They will be given the 17-week basic flying course at the Air Force Pilot Training School, San Marcos Air Force Base, Texas, followed by a 13-week Army Aviation Tactics Course at Fort Sill, dependent upon available school quotas.

Complete information on the National Guard Army pilot program is available from the Adjutants General of the States, the Territories and the District of Columbia.

AERONAUTICAL ENGINEERING

Design Aircraft & Components — Study with Jets & Rockets — Great Future — Advanced Aeronautical Subjects — World-Wide Enrollment — Fully Accredited — Est. 1929 — Approved for Vets — CAL-AERO grads in heavy demand.

WRITE TODAY for Special Information

CAL-AERO TECHNICAL INSTITUTE

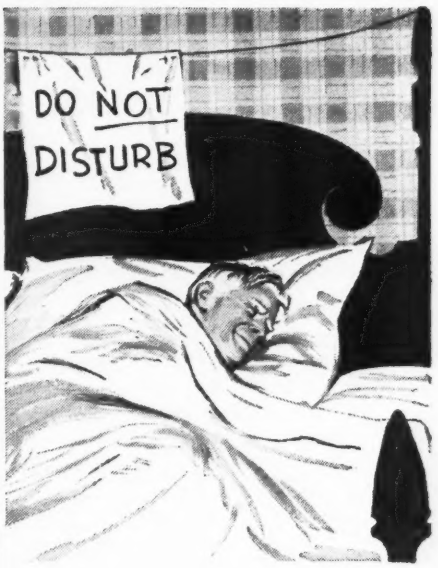
GRAND CENTRAL AIR TERMINAL
GLENDALE 1, CALIFORNIA Dept. AF

☐ Aeronautical Engineering ☐ Master Aviation Mechanics
☐ JET ENGINE Maintenance & Overhaul

Name _____ Age

Address _____

City _____ Zone State



What is so right about this picture?

Is it that Dad's finally retired . . . the old alarm clock gagged for good?

Is it because now Mom won't have to watch him leave for the office any more, looking just a little bit tired?

Or is it because now Dad and Mom will be starting an especially happy time of life *together?*

We think it's all these things—all the things that are only made possible by financial security.

Nearly everyone seeks financial security, but *far too few* find it. That's because financial security seldom is achieved without a *sound, carefully executed* savings plan!

U. S. Savings Bonds offer you two absolutely safe, automatic plans for saving: The *Payroll Savings Plan* where you work or the *Bond-A-Month Plan* where you bank.

By signing up for one or the other of these plans, U. S. Savings Bonds are purchased for you out of your savings or income . . . automatically.

You *can't* forget to save . . . your saving is done for you! And remember, U. S. Savings Bonds pay you *4 dollars for every 3* invested, in ten years.

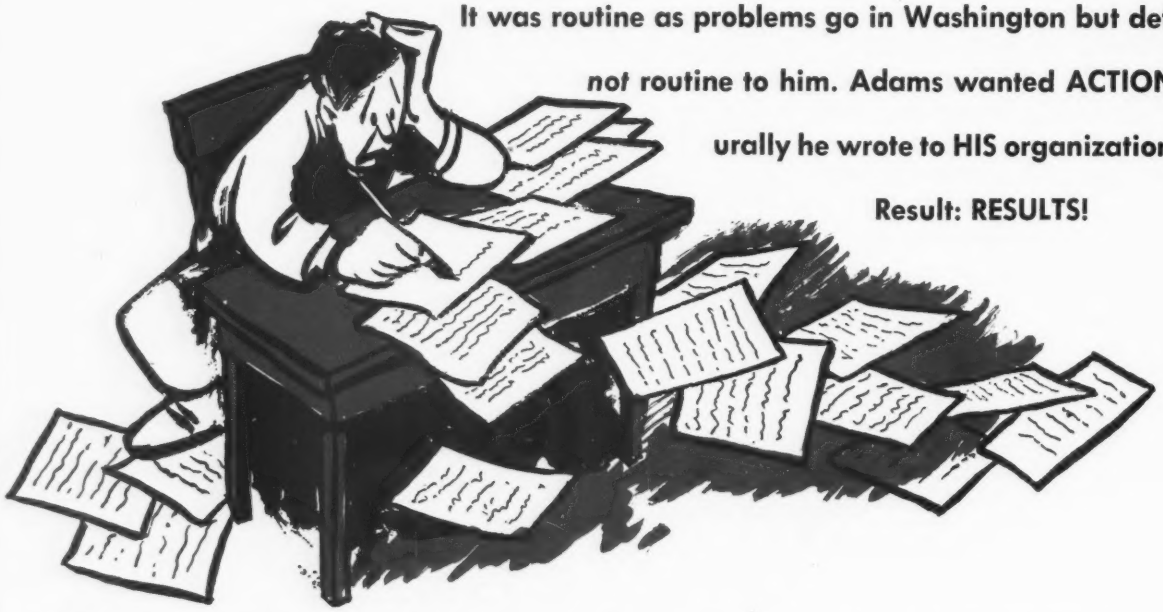
Start planning your own retirement today!

Automatic saving is sure saving –

U. S. DEFENSE BONDS

Contributed by this magazine in cooperation with the Magazine Publishers of America as a public service.

Adams had a problem!



It was routine as problems go in Washington but definitely *not* routine to him. Adams wanted ACTION. Naturally he wrote to HIS organization, AFA. Result: RESULTS!

AS ADAMS PUT IT "Last year I wrote to your office regarding an appointment in the USAFR. I came out of the last war as a corporal. Through your courtesy I was sent a copy of the Air Force regulations pertaining to me and other information regarding a commission. I followed your instructions and, by golly, I MADE IT. Second lieutenant, USAFR!"

Merlin R. Adams
North Hollywood, Calif.

AIR FORCE ASSOCIATION specializes in cutting red tape. Experts in AFA's greatly expanded Personal Service Department follow requests from members through Washington's huge and complex administrative machinery until they *get the answer.* We are the PERSONAL WASHINGTON REPRESENTATIVE of every AFA member. *Every* question that comes from members is important. *Every* question gets ACTION. Here are a few of the personal services AFA performs for its members:

ANSWERS inquiries relative to latest USAF Reserve recall policy, critical MOSs, deferments, qualifications required for Regular AF enlistment, pending AF legislation, organizational changes in USAF structure, latest AF planes and equipment, personnel policies, Airmen's Career Program, current AF payscale.

ASSISTS Air Reservists on assignments, commissions, promotions, field training, extension courses, MOS changes, applications for reserve and active duty assignments and Aviation Cadet training, requests for Awards and Decorations.

SEE THAT THIS COUPON GETS IN THE HANDS OF AN ELIGIBLE MEMBER

AIR FORCE ASSOCIATION
1424 K St. N.W.
Washington 5, D.C.

Please enroll me as a member of AFA and send me my lapel emblem and membership card. I enclose $4 for annual dues ($2.50 of which covers a year's subscription to AIR FORCE).

☐ I have been honorably separated from the AAF, or
☐ I am now on active duty with the U. S. Air Force

My Air Force Unit Identification

Air Force.....

Command.....

Other.....

.....
Signature

NAME.....
Print Plainly

ADDRESS.....

CITY.....ZONE.....STATE.....

AIR FORCE ASSOCIATION can be YOUR personal representative in Washington. AIR FORCE ASSOCIATION can give YOU the answers.

Merlin R. Adams, of North Hollywood, is only one of the many AIR FORCE ASSOCIATION members who has been helped by AFA's red-tape cutting department. This is no time for fumbling about in the dark. In the uncertain days ahead you will want, quick, authoritative answers. AFA represents YOU in Washington.

Join Air Force Association and get YOUR Answers

For Your Security and Peace of Mind: AFA Accident Insurance

LOW-COST PROTECTION FOR MILITARY AVIATION ACTIVITIES PLUS

general accident insurance—including private and commercial flying

issued by Lloyd's of London for Air Force Association

HERE'S A NEW insurance plan which protects you and your family, day and night, at home or away, on land, on sea, and in the air, any place in the world, even while you pilot—or are a passenger in—military aircraft, and even while you are on active duty with the Air Force.

AFA Accident Insurance requires no physical examination. It pays off for loss of sight or limb, as well as for accidental death, in certain categories. No other accident insurance offers you—at such small cost—comparable military and civilian air and ground protection. Available in units of $1,000—up to a maximum of $10,000 — AFA Accident Insurance is exclusively for members or associates of the Air Force Association. Annual premiums per $1,000 of insurance range from $3 to $15. See chart below.

SELECT THE INSURANCE suited to your own status

CLASSES A-1 and A-2

Designed especially for pilots and other flight crew members of the REGULAR military services, who are engaged in military flying activities as a full-time occupation. A-1 covers accidental death and loss of sight or limb from any cause, including military or civilian accidents, on land or sea or in the air, world wide. A-2 offers the same accidental death coverage as A-1 but does not cover loss of sight or limb.

CLASSES B-1 and B-2

Designed especially for pilots and other flight crew members in the RESERVE military services, whose flying activities are part-time (generally limited to weekends and the two-week annual military service period). B-1 covers all types of accidental death, whereas B-2 is limited to death from aviation accidents only. B-1 also has broader loss of sight and limb benefits than B-2 (see chart).

CLASS C

Designed for all persons who are not flying personnel and whose participation in aviation is limited to traveling in aircraft as passengers or to working in or around aircraft on the ground. Death or injury from every type of non-aviation accident, and from certain types of aviation accidents, is covered (see chart).

HERE'S EXACTLY WHAT YOU GET AND WHAT IT COSTS

Premiums payable annually, semi-annually, or quarterly

CLASS OF POLICY	PERSONS ELIGIBLE: All AFA members and associates (other than paratroopers and airborne infantry) except as follows:	SCOPE OF POLICY COVERAGE (indicated by √)						ANNUAL PREMIUM PER $1,000
		Death Benefits			Loss of Sight or Limb Benefits			
		Military Aviation Accident	Civil Aviation Accident	All Other Accidents	Military Aviation Accident	Civil Aviation Accident	All Other Accidents	
A-1	No exceptions	√	√	√	√	√	√	$15.00
A-2	No exceptions	√	√	√				13.80
B-1	Flight-rated REGULAR military personnel not eligible (see note 1)	√ (see note 2)	√ (see note 2)	√		√ (see note 2)	√	7.20
B-2	Flight-rated REGULAR military personnel not eligible (see note 1)	√ (see note 2)	√ (see note 2)			√ (see note 2)		4.80
C	FLIGHT-RATED Regular and Reserve military personnel not eligible (see note 1)	√ (see note 3)	√ (see note 3)	√	√	√	√	3.00

NOTE 1: "Flight-rated personnel" means pilots, co-pilots, navigators, flight engineers, radio operators, bombardiers, aerial gunners, and similar flying personnel of the military services or their reserve components.

NOTE 2: Class B-1 and Class B-2 policies expire with respect to aviation accident coverage if the insured person serves 120 days, consecutively or non-consecutively, on active military duty during the policy period; but Class B-1 coverage continues in effect thereafter for other types of accidents.

NOTE 3: Class C coverage does not apply to accidental death of the insured person on an aircraft unless he is on such aircraft as a passenger or in the course of his employment as ground crew or administrative personnel.

CLIP AND MAIL TODAY

AIR FORCE ASSOCIATION

1424 K ST., N. W. • WASHINGTON 5, D. C.

Please send complete information about AFA Accident Insurance, together with schedule of optional means of payment, and application blank.

Name.....

ADDRESS.....

CITY.....ZONE.....STATE.....

AFA TRAYETTES

These beautiful AFA Trayettes, 4½ inches in diameter, can be used as ash trays, coasters, or hung on your wall. A polished brass ring encloses a tough, milk glass base with baked in, full color numbered Air Force insignia. An attractive accessory for study, den or living room. Ten percent discount on all orders of one dozen or more.

$2.00

AFA ZIPPO LIGHTERS

Here is your personalized copy of the world famous ZIPPO Lighter with ZIPPO'S unconditional guarantee. These popular wind-proof lighters have the Air Force Association insignia etched in full color on the front. This is a real bargain and makes a handsome gift. If you wish your name engraved on the back, please add one dollar.

$4.00

AIR FORCE BINDERS

Don't let your copies of Air Force Magazine get torn and dirty! This attractive new binder, sturdily constructed of 130 point bindersboard, covered with beautiful blue Levant Leathercloth, holds 12 copies—a full year's subscription. Magazines can be inserted and removed individually, each held in place by its own wire retainer.

$2.85

AIR FORCE ASSOCIATION
c/o Department LO-2
1424 K St. N.W., Washington 5, D. C.

.....Ash Trays @ $2.00 each ☐
.....Zippo Lighters @ $4.00 each ☐
.....Zippo Lighters (engraved) @ $5.00 each ☐
.....AIR FORCE Binders @ $2.85 each ☐

SORRY NO COD's

NAME.....
STREET.....
CITY.....ZONE.....STATE.....
I enclose check or money order for

Place Your Order Now

The above items are ready for immediate shipment postpaid. Air Force Association guarantees all items against breakage in transit.

Mail To-day!

AFA CONVENTIONS!

ATTENTION

MEMBERS IN:

New York
New Jersey
Michigan
Ohio

Important AFA Meetings are Scheduled for Your State... Plan Now to Attend.

NEW YORK: The 1951 New York Wing convention will be held in Syracuse at Hotel Syracuse, May 19. Forrest Vosler, 6 Bradley Street, Marcellus, N. Y., is convention chairman.

NEW JERSEY: Paterson's Alexander Hamilton Hotel will be the scene of the 1951 New Jersey Wing convention on June 16, John J. Currie, 136 Carlisle Avenue, Paterson, Wing Commander for the state, announces.

MICHIGAN: Plans for the 1951 AFA state Wing convention for Michigan are announced by Commander Frank Ward. It will be held at Post Tavern Hotel in Battle Creek 1:30 PM, May 20. Ladies invited. Convention chairman is Glenn Sanderson, c/o Post Tavern Hotel.

OHIO: The 1951 Ohio AFA Wing convention will be a two-day event—May 26 and 27. Dayton is the site and the Biltmore Hotel will be the headquarters. The convention will be climaxed by the opening on Sunday, the 26th, of the annual Dayton Squadron Glider Meet. Convention chairman will be Dr. J. H. Meyer, 1814 Wabash Avenue, Dayton.

Contact the appropriate convention chairman for information.

JOIN YOUR FRIENDS AT AFA MEETINGS